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The Oliver-Sharpey Lectures

ON

RECENT STUDIES ON THE TISSUE-LYMPH CIRCULATION.

Delivered before the Royal College of Physicians of London on April 12th and 14th, 1904,

BY GEORGE OLIVER, M.D., F.R.C.P. LOND.

LECTURE I.

Delivered on April 12th.

THE LATE PROFESSOR WILLIAM SHARPEY, F.R.S.

MR. PRESIDENT, FELLOWS OF THE COLLEGE, AND GENTLEMEN,—Before proceeding to the subject of this the first of the Oliver-Sharpey lectures I must say a few words in memory of the late Professor Sharpey in whose honour this endowment has been made. This is to me a most grateful duty, for to his vivid and sound teaching I owe a life-long love of physiology and his sterling qualities of mind and heart are to me one of my most cherished memories. Happy the student who had the good fortune to fall under the spell of such a great teacher as William Sharpey undoubtedly was. His lucidity and picturesqueness of style, his directness and simplicity, his happy faculty of illustration, and, withal, the geniality and goodness of heart which enveloped and adorned all his well-digested teaching, must have deeply impressed and powerfully influenced many generations of students at University College from 1835 to 1873. In those days physiology was waking to the fuller light we now enjoy. Her teachers needed a cautious, trained judgment—such as William Sharpey pre-eminently possessed—rather than the somewhat venturous ways of the discoverer, for there were many alluring lights in the air and the pupil needed, warning as well as teaching. And so the settled dawn of real progress was fostered by William Sharpey and his life-work is now perpetuated and fully developed in our British school of physiology. Hence it seems fitting that in this endowment we should indicate what we conceive to be his rightful place in the modern history of physiology. The aim of this endowment is to foster the application of physiological knowledge to the prevention, alleviation, and cure of disease and the prolongation of life, believing, as we do, that the medicine of the future will become more and more physiological as we understand more clearly the forces of nature. May the duty imposed on this College contribute, in however small degree, to the fruitful realisation of our ideal.

TISSUE-LYMPH CIRCULATION.

I propose to submit to you the results of a study on the circulation of the tissue fluid in man, or, in other words, on the fluid transfers between the blood and the tissues. Apart from its intrinsic physiological interest this subject has important bearings on the practice of medicine.

When I had the honour of delivering the Croonian lectures before this College in 1896 some observations were adduced which pointed to certain inferences in regard to that *terra incognita* in man, the great extravascular circulation. But these inferences were merely suggestions prompted by the incomplete data at my command. Subsequent work enables me to present the results of observation in a somewhat more definite and extended form. Some of the conclusions suggested to me by this inquiry were so unexpected that I was naturally led to repeat my observations in every department of it over and over again and to scrutinise all the facts with more than ordinary diligence. Over 3000 observations have been made in health and disease; but I propose in these lectures to use mainly the physiological material. As I proceed, however, you will readily recognise the drift and bearing of the physiological data on medical work and I will summarise their practical teaching.

METHODS AND APPARATUS.

[Dr. Oliver here described the methods and apparatus[1] employed with certain improvements in the hæmocytometer,[2] hæmoglobinometer,[3] and hæmodynamometer.[4]]

THE EFFECT OF THE INGESTION OF FOOD ON THE TISSUE-LYMPH CIRCULATION.

Elsewhere[5] I have shown that the ingestion of food initiates an interesting series of variations in the blood and blood pressures which culminates in a prolonged wave-like exudation of tissue lymph and that this excitation in the circulatory system recurs with perfect regularity after each meal. Subsequent inquiry has amply confirmed this position.

The digestive variations in the blood pressure.—The ingestion of food invariably raises the arterial blood pressure (Fig. 1). In an hour after a meal it rises 15 or even 20 millimetres of mercury, then it begins to fall, and in from two and a half to three and a half hours it become stationary until the next meal or until exercise is taken. The venous pressure after food has been made the subject of more particular study, because of a dip in that pressure occasionally observed, for a very brief period, when the maximum effect of digestion on the circulation is attained—an hour after a meal. In my earlier observations (made in cold weather) I was disposed to think that this temporary fall was more frequently met with than it is. The superficial veins and venules are very sensitive to the influence of cold after a meal, when the rise of the capillary pressure favours the dissipation of heat from the surface of the body. In this way the occasional short dip of venous pressure may be produced, but as a rule the curve of this pressure rises and falls throughout with that of the arterial pressure. It may, I think, be inferred from these facts that the capillary blood pressure follows the same curve of rise and fall after meals, for we know that this pressure is more closely related to the venous than to the arterial pressure and that if both these pressures rise together we may fairly assume that the capillary pressure will also rise. After food the pulse rate also increases and in an hour it may have gained from eight to 15 beats a minute. When the pulse pressure gauge is applied so as to arrest the pulsation of the radial artery (the finger being used as the indicator) the reading becomes cardiometric and is generally increased in anhour after a meal from 15 to 20 millimetres of mercury. Therefore it would seem that digestion very considerably stimulates the heart, augmenting the output and the contractile energy of the ventricle.

FIG. 1.

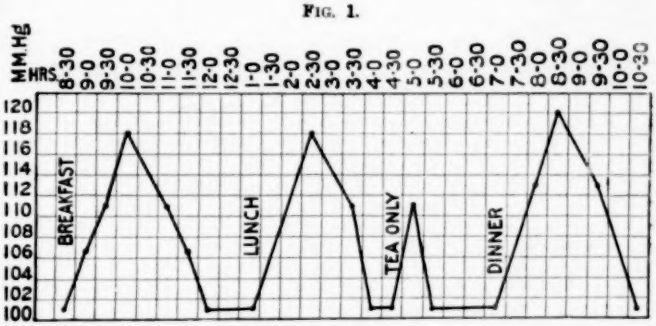


Chart showing rise of arterial pressure after food.

The essential aim of the digestive excitation of the circulatory system is to raise the capillary blood pressure and

[1] THE LANCET, June 6th (p. 1541), 13th (p. 1621), 20th (p. 1699), and 27th (p. 1778), 1896; and Oct. 3rd, 1903, p. 940.

[2] A duplicated hæmocytometer arranged for tissue-lymph determination is supplied by Mr. Lovibond, the Colour Laboratories, Salisbury.

[3] An improved cell with mixing chamber, which secures greater accuracy and easy filling without a bubble, is supplied by Mr. Lovibond.

[4] A slide and simple wrist-rest (made by Mr. Hawksley, 357, Oxford-street, London, W.) greatly facilitate and render more precise the use of the instrument.

[5] Proceedings of the Royal Society, June 11th, 1903; THE LANCET, Oct. 3rd, 1903, p. 940; and the Journal of the British Balneological and Climatological Society, 1903.

according to the teaching afforded by my observations this end is attained by the increased activity of the cardiac muscle. But would it still be effected were some substance to be taken with the meal which lowered the arterial pressure by merely dilating the arteries and arterioles and left the raised cardiac action which results from the ingestion of food unimpaired? We should expect to find a great increase in the venous pressure and in the capillary pressure which would still be between two higher pressures. Now this is precisely what happens when 0·065 gramme (one grain) of Witte's peptone is taken with a meal. This remarkable vaso-relaxant, to which I will again refer in the second lecture, does not lower the heart's action, for the blood-pressure gauge gives the same cardiometric rise whether the peptone is added to a meal or not; consequently the reduction of the arterial and arteriolar re-istance effected by this substance combined with the digestive cardio-stimulation should produce a great rise in the capillary blood pressure. [A chart was here exhibited showing a simultaneous rise of the venous pressure from 20 to 50 millimetres of mercury and fall of the arterial pressure from 100 to 80 millimetres of mercury. Food was taken at 1 P.M. and the maximum venous rise and maximum arterial fall occurred at 3 P.M.] We may therefore infer that we may have a rise in the capillary pressure either with an increase or a decrease of the arterial pressure according as we have cardiac stimulation (as after meals) or vaso-dilation.

DIGESTIVE VARIATIONS IN THE BLOOD.

I have followed three series of alterations in the blood during digestion—namely, in the corpuscles, in the hæmoglobin, and in the specific gravity. As the variations in the chromocytes and in the hæmoglobin are identical they will be taken together.

Digestive variations in the corpuscles and hæmoglobin.—The finger, having been subjected to the compression of the rubber rings, yields blood which shows a progressive rise in the percentages of the corpuscles and of the hæmoglobin until an hour has elapsed, when the increment amounts to from 8 to 10 per cent.; then the percentages gradually fall and they finally settle down to normal in from two and a half to three and a half hours (Fig. 2, A). Should, however, the blood be derived from the finger in the ordinary way (without compression) the successive readings of the blood elements indicate a progressive fall in the percentage which in an hour amounts to from 6 to 8 per cent. when a rise sets in and recovery is eventually established (Fig. 2 B).

FIG. 2.

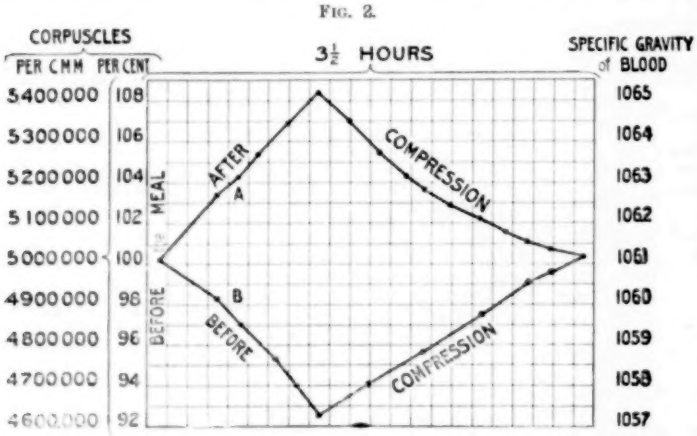


Chart showing the percentages of corpuscles and the specific gravity of the blood before and after compression. Observations made before a meal and at frequent intervals afterwards.

Digestive variations in the specific gravity of the blood.—The blood, as shown by compression of the finger, rises in specific gravity after meals, the rise reaching its maximum point (e.g., from 1061 to 1065) in an hour. The specific gravity then begins to fall, settling down to the initial point at the conclusion of the wave-like disturbance (Fig. 2, A). On the other hand, the blood derived from the finger uncompressed affords a specific gravity which follows the contrary course—that is to say, it falls and then rises. (Fig. 2, B). When the digestive disturbance is over the variations in the blood, like those in the circulation, cease and the readings in normal subjects at rest continue to be alike in both samples (before and after compression) until the following meal.

The digestive exudation of tissue lymph.—On reviewing the foregoing data it is obvious that they indicate strictly concurrent events. All the four series of variations follow exactly the same curve. They begin together, they attain their maximum development at the same time, and they simultaneously cease. What is the link which binds them together? If we suppose that the ingestion of food in some way raises the capillary blood pressure which exudes a filtrate of a portion of the liquor sanguinis into the areolar spaces all the changes in the blood which I have described will naturally follow (see Fig. 2). In proportion to the exudation under a rising capillary blood pressure the blood will become more and more concentrated in chromocytes and in hæmoglobin, and inasmuch as its specific gravity mainly depends on the corpuscles the density of the blood will rise *pari passu* with the increased concentration. Then, when the capillary pressure begins to fall, as it does after the acme of the digestive disturbance has been attained, the concentration of the blood diminishes and we may assume that either absorption of the watery elements of the effused lymph overbalances exudation or that the effusion is being returned by the lymphatics to the blood. Now I have shown that none of these alterations in the blood could have been ascertained by the examination of blood derived from the finger in the ordinary way, they only become apparent after the compression of the tissues by the rubber rings which remove the extra-capillary fluid and enable us to obtain the blood undiluted by that fluid. But the progressive readings of the ordinary samples of blood, though valueless, and actually misleading when accepted as independent testimony of blood changes during digestion, become instructive when compared with the readings of samples obtained after compression, for they then afford a measure of the amount of fluid withdrawn from the blood. The differential readings of the hæmocytometer tubes made every 15 minutes after a meal show the greatest divergence and therefore the largest quantity of tissue fluid, just at the time (an hour after a meal) when the digestive blood-pressure wave and the concentration of the blood attain their maximum development. The difference, indicated by the scale on the tubes, will amount to from 15 to 20 per cent.; it will then gradually diminish, and will finally disappear in from two and a half to three and a half hours, and will not reappear until after the next meal or until exercise is taken. The amplitude and duration of the lymph wave are influenced by several conditions, such as the tone of the subject, the bulk and nature of the meal, the use of beverages, rest, or exercise.

Other rhythmical digestive variations.—I will now direct your attention to other physiological variations produced by the ingestion of food, synchronous with the foregoing. For the influence of digestion is not merely confined to alterations in blood pressure, the composition of the blood, and the production of tissue lymph: it is still more far-reaching and a study of these further rhythmical changes will widen our grasp of this interesting subject and enable us to discover the link which binds together all these apparently diverse physiological movements.

The digestive curve of augmented respiratory exchange.—I show you Fredericq's curve of daily variation in the absorption of oxygen. [This chart showed that the absorption of oxygen, which was 4·5 litres when food was taken at 8.30 A.M., rose steadily to 5·8 litres at 10 A.M. and then fell steadily to 4·6 litres at 1.30 P.M. Food was again taken at 1.30 P.M. and the absorption of oxygen rose steadily to 6·6 litres at 3 P.M.] You see it follows exactly the line of development and duration of the curves just studied.

Other observers (Vierordt, Speck, Berg) besides Fredericq have shown that the intake of oxygen and the output of carbonic acid are greatly stimulated by the ingestion of food.

A rhythmical variation of muscular contractility after food.—Physiology shows that the greater part of the oxidation processes of the body go on in the muscles and that when these are quiescent their metabolic activity merely diminishes and does not cease. But does it vary during intervals of rest? Is it stimulated by digestion? The increased intake of oxygen at that time is somewhat favourable to such a view. But we must remember that the secretory work of the digestive glands will require an augmented supply of oxygen, and, moreover, the process of oxidation appears as a rule to be more closely associated with the katabolic than with the anabolic side of metabolism, with reduction and cleavage of the organic molecule rather than with construction of it and repair, which we know to be the physiological aim of digestion. I have, however, observed some facts which show that very marked alterations do go on in the muscles after meals. These facts came to light while studying the effect of muscular tension on the arterial blood pressure. A short, general tetanic contraction always raises the arterial pressure. This result is mainly due to the compression of the intramuscular vessels produced by the shortening of the fibres of the muscles. This method of testing muscular contractility, however, involves other physiological factors, such as cardiac excitation and a possible variable effect from the vaso-motor condition of the arteries. Cardiac stimulation may, however, be excluded from consideration, as it is common to all the observations, and I have not seen any sufficient evidence to show that the tonus of the arteries materially affects the result. I have invariably found that the maximum response in the arterial-pressure rise is produced by quite a moderate degree of muscular contraction, that the results obtained are

FIG. 3.

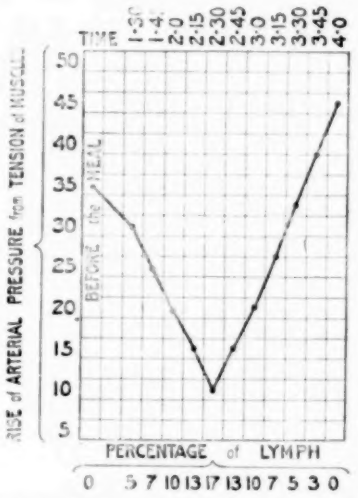


Chart illustrating the effect of muscular contraction on the arterial pressure after a meal. It shows the obstructing effect of tissue lymph and the ultimate gain in contractility.

constant and are trustworthy indications of muscular contractibility,[6] which varies very considerably at different times. The study of these variations is instructive; it has shown that they always follow a certain order, or, when plotted out, a certain curve, as in Fig. 3. You observe that the effect of the muscular tension in raising the arterial pressure diminishes *pari passu* as the effusion of lymph increases and develops again as the lymph disappears. From this fact (which is apparent whenever tissue lymph is thrown out, whether by meals, exercise, or sleep) I conclude that the lymph exuded into the muscular tissue checks the shortening of the muscular fibres and thus the effect of their contraction on the intramuscular vessels is diminished; so the failure to raise the arterial pressure to the same height as before the effusion indicates the amount of the infiltration clogging the contracting fibres.

These observations on the condition of the muscles during digestion, therefore, confirm the teaching as to the outflow and absorption of lymph furnished by the differential examination of the blood. You will note, further, that at the termination of the digestive disturbance there is apparent a gain in the contractile energy, as expressed in the additional rise of ten millimetres of mercury in the arterial pressure produced by muscular tension. This gain (which only becomes evident after the absorption of the lymph) varies from five to 20 millimetres, according to the nature of the food consumed and the need for recuperation. You will find the tension test useful in practice. In those cases in which you observe a rise in the arterial pressure there will be an increased exudation of lymph, for the two facts go together; when the impairment of the muscular contractibility on the arterial pressure will not only confirm your observation of that pressure but will provide you with a ready indication of the amount of tissue lymph. For example:—

TABLE I.

No. of case.	Arterial pressure.	Muscular contractibility rise of arterial pressure.
1.	148 mm. Hg.	0
	115 ,, ,,	10 mm. Hg.
	100 ,, ,,	30 ,, ,,
2.	135 ,, ,,	0
	100 ,, ,,	25 mm. Hg.
3.	120 ,, ,,	5 ,, ,,
	100 ,, ,,	40 ,, ,,

The observations were made at a time when normally the arterial pressure should be 100 millimetres of mercury. The reduction in pressure was effected by treatment.

The gastric juice curve.—There is also the rhythmical curve expressing the work of the gastric glands, so well worked out by Pawlow, which is synchronous with all the foregoing physiological variations. [A chart was here exhibited showing that the yield of juice rose abruptly in an hour from 0 to 10 cubic centimetres and during the next four hours fell gradually to 0.] All the six concurrent curves of augmented functional activity which I have just described are obviously but the widely diffused effects throughout the organism of a great central movement initiated by the ingestion of food through the agency of the nervous system. How some of these effects are produced and how they may be varied and controlled are questions to which we must now turn.

The effects of typical meals on the digestive lymph flow.—Let us now study the digestive curves of lymph exudation produced by four different kinds of meals: First, the ordinary mixed meal containing the usual proportions of animal food, vegetables, and farinacea; secondly, the meat meal, consisting of animal food in various forms, with cheese and butter and a very little toast; thirdly, the vegetable meal with farinaceous puddings, fruit, and cheese; and fourthly, the milk meal, milk, bread, and farinaceous puddings. In each case the fluid supplied was a tumbler of water and the amount of food was merely limited by a feeling of satisfaction. Sugar and salt (two grammes of each) were taken in the same quantity at all the solid meals. The meal was at one o'clock and the same subject was, throughout, submitted to observation. No exercise was permitted for an hour before and after meals, nor until the digestive disturbance had quite subsided. Observations were made just before the meals and every 15 minutes after them. The results are epitomised in the following table (Table II.).

[6] The words "contractility" and "contractibility" are used in the lectures each with a specific meaning and not convertible. Contractility = the capability of contracting—i.e., the property of contracting (*active*). Contractibility = capability or possibility of being contracted; admitting of being contracted (*passive*); for instance, the muscular fibres are prevented from contraction by the presence of lymph (contractibility) but can contract to their fullest extent when no lymph is present (contractility).

TABLE II.

The meal.	Lymph effusion.	
	Maximum per cent.	Duration.
Roast meat	30·0	5 hours.
Mixed	17·5	3 ,,
Vegetable	12·5	3 ,,
Milk	7·5	1½ ,,

You see that the lymph and pressure curves produced by these several kinds of meals vary enormously in amplitude and length and in the following descending order—meat meal, ordinary meal, vegetable meal, and milk meal. The net gain in muscle contractility shown by the tension test after the subsidence of the digestive disturbance and the removal of the lymph is in the same order, expressed by the following figures: 15 (meat meal), 10 (ordinary meal), 7 (vegetable meal), and 3 (milk meal). These observations appear to me to illustrate the undoubted power we possess of controlling by diet the blood pressure and the amount of tissue lymph. Some light will be thrown on them by studying the effect of the separate food elements.

The effect of the food elements on the production of tissue lymph.—I will first mention those substances which, according to my observation, do not alter the blood pressure or cause the flow of tissue lymph—cold water, starch, fats, gelatin, proteid as represented by myosin or egg albumen, the sugars (cane sugar, glucose, maltose, galactose, mannose, dextrose, and inulin), pepsin, and hydrochloric acid. Cold water (e.g., 500 cubic centimetres, or a little over 16 ounces) has no effect but the same amount of warm water lowers the arterial pressure. This is therefore a temperature effect. In regard to proteids I selected chemically pure myosin (muscle proteid) and white of egg as representative of the group. So far their effects have been negative. In support of this conclusion we have also the fact that the lymph exudation produced by a meal of roast beef is 30 per cent., whereas that caused by a meal of boiled meat is only 7 per cent. All the sugars named also produce negative results. There are, however, other sugars (glycogen, lævulose, and lichenin) which have been found decisively to affect the blood pressure and the flow of lymph. To these I will refer later.

Inorganic salts.—Of the salts I have so far only worked on the effects of the chlorides and carbonates of sodium, potassium, and ammonium. I will here, however, only refer to the sodium and potassium chlorides as the observations on the effects of the other salts are not sufficiently advanced for publication. Sodium chloride in percentages varying from 1·5 to 2·0 invariably raises the arterial pressure and increases the outflow of tissue lymph—four grammes produce in 30 minutes the exudation of 15 per cent. lymph, which is completely absorbed in 30 minutes more. Potassium chloride lowers the arterial pressure, four grammes producing a fall of from 10 to 12 millimetres of mercury. Sodium chloride increases and potassium chloride diminishes the digestive curves. When these two salts are taken in equal proportions—e.g., two grammes of each—their effects on the blood pressure neutralise each other. I will recall to your minds the important rôle which our distinguished Fellow, the late Sir William Roberts, believed that sodium chloride played in the pathogeny of gout and of his valuable suggestion that potassium chloride may be advantageously substituted for sodium chloride by gouty subjects.[7] Following a totally different line of inquiry to that which led him to this conclusion I have proved the antagonism between these salts in their action on the blood pressure and on the tissue-lymph circulation, and it will be seen in the second lecture that I have arrived at the same goal in regard to sodium chloride being a favouring factor in the causation of gout and to the inhibiting influence of potassium chloride upon it.

Muscle extractives.—The lymph exudation produced by home-made beef-tea derived from half a pound of beef infused first in cold water and then in hot, is similar in amplitude to that of a meat meal (*see supra*), only it is of shorter duration. Two well-known beef extracts, selected out of several as typical of the rest, gave a somewhat smaller amount of lymph exudation, the quantities taken being those directed by their proprietors. No salt or other seasoning was added to the preparations. The following products derived from muscles have been administered, dissolved or suspended in six ounces of cold water: creatin, creatinin, xanthin, hypoxanthin, uric acid, carnin, and glycogen. I have not yet worked with the amino-purin bodies, guanin and adenin, but inasmuch as guanin is insoluble and as Dr. I. Walker Hall informs me that adenin, contained in the thymus gland, has been entirely recovered by him in the fæces within 48 hours I doubt if these substances will produce a reaction in the circulation of blood or lymph.

Inasmuch as there is much more work to be done in this department of the inquiry than I have so far been able to compass I will just now merely summarise my present conclusions, hoping to publish later the detailed results. The matter of dosage had first to be worked out gradually and this was done step by step, as I wished to avoid an error apt to be overlooked by inquirers into the ways of nature—namely, the administration of large, bordering on toxic, doses. The plan adopted was to commence with very small quantities, such as a quarter or half grain, and to make almost continuous observations. Then, if no effect on the blood pressure was apparent the dose was doubled until such an alteration was produced as to be undoubted, but still within the known physiological range of variation. All that remained was to repeat the dose as often as necessary, so as to work out the curve of its effects in all departments. For this purpose consecutive observations were made regularly every five minutes until the normal condition of the blood and blood pressure was restored. The doses thus worked out may seem to the experimental physiologist to be absurdly small, but the uniform results obtained in different subjects showed that it was not necessary to experiment with larger quantities. My observations show that uric acid (either as uric acid or as ammonium urate), xanthin, creatinin, carnin, and glycogen produce a decided rise in the blood pressures (arterial, capillary, and venous) and increase the exudation of tissue lymph, the pressure and the exudation rise being proportionate to each other. The accompanying table gives the doses, the maximum lymph exudation and arterial pressure, and the duration of these effects.

TABLE III.

—	Maximum rise.		Duration of effect in minutes.
	Lymph, per cent.	Arterial pressure mm. Hg.	
Carnin, gramme 0·0325 (½ grain)	15	115	30
Creatinin, gramme 0·0325 (½ grain)	14	114	30
Glycogen, gramme 0·0325 (½ grain)	6	106	23
Do., gramme 0·13 (2 grains)	20	120	90
Uric acid, gramme 0·0325 (½ grain)	17	117	85
Ammonium urate, gramme 0·13 (2 grains)	25	125	110
Xanthin, gramme 0·0325 (½ grain)	20	120	105

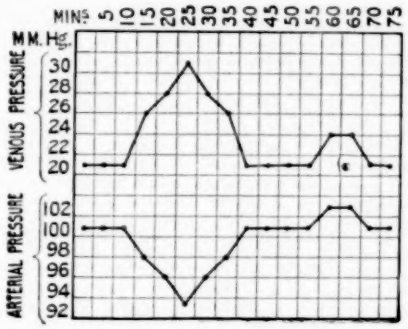
A long latent interval (about 20 minutes) elapsed after swallowing uric acid or ammonium urate and xanthin before any effect on the blood pressure was apparent, a fact which may be accounted for by the low solubility of these products, which, however, produced effects more decided and more prolonged than those which followed the other products. Glycogen belongs to the group of polysaccharides which contains carbohydrates of high molecular weight. That of glycogen has not (so far as I know) been determined directly by chemical methods. From my observations of its physiological activity I anticipate that something interesting will be discovered by a study of its chemical constitution. Creatin and hypoxanthin differ from the other allied products in their effects on the arterial pressure. Creatin produces at first a fall which is followed by a rise and hypoxanthin causes a marked fall in the arterial and an equally decided rise in the venous pressure. The curves produced by only 0·0325 gramme of hypoxanthin show a rise in the venous pressure from 21 to 56 millimetres of mercury produced in 35

[7] On the Chemistry and Therapeutics of Uric Acid, Gravel, and Gout, the Croonian Lectures, 1892, by Sir William Roberts, F.R.S.

minutes and a fall of the arterial from 100 to 85 millimetres of mercury. Hypoxanthin is therefore a very active substance and the amount of lymph exuded was 20 per cent. at the acme of the effusion, when muscular contraction failed to produce the slightest rise in the arterial pressure. When xanthin is combined with it in equal parts the blood pressures remain unaltered. In like manner when creatinin is taken with creatin (equal parts) the preliminary fall of arterial pressure produced by creatin fails to appear, and the effects of the two agents balance each other for 20 minutes, after which the rise of creatinin combined with the ultimate rise of creatin take their normal course. It is curious that bodies so closely allied chemically as creatin ($C_4H_9N_3O_2$) is to creatinin ($C_4H_7N_3O$) and xanthin ($C_5H_4N_4O_2$) to hypoxanthin ($C_5H_4N_4O$) should differ in their action on the arterial pressure. But all the muscle-derived products raise the capillary blood pressure, increase the exudation of tissue lymph, and are cardiac stimulants.

In the course of this inquiry it has been useful as a confirmation of observation to ascertain the resultant effect caused by combining products which have been found to possess contrary actions on the vaso-motor mechanism. I have thus associated glycogen or ammonium urate with Witte's peptone, with results showing either a complete neutralisation of the effect of each agent on the arterial pressure, or of a modification of it, according to the proportions in which the two products were combined. Lately I have found that hippuric acid is another vaso-dilator which is apparently just as decided as Witte's peptone For example, 0·13 gramme (two grains) of ammonium hippurate reduces the arterial pressure to 85 millimetres of mercury and raises the venous pressure to 42 millimetres of mercury. In Fig. 4 you observe the resultant effect of

FIG. 4.



Arterial and venous pressure curves of ammonium urate 0·065 gramme, with ammonium hippurate 0·13 gramme.

one grain of ammonium urate with two grains of ammonium hippurate. During the first half of the time the hippurate overmasters the slowly developing effect of the urate and in the second half the urate just overbalances the waning power of the hippurate. When both products are given in the same dose (two grains of each) the cross effects of both are manifest but that of the urate salt predominates.

The active principles contained in beverages.—Allied to most of the foregoing products in their chemical constitution and physiological action on the blood pressure and lymph circulation are the active principles of tea, coffee, and cocoa, caffein and theobromin being methyl-xanthins, the former being called tri- and the latter di-methylxanthin. They are therefore bodies with a purin basis (C_5N_4) and, like most of the other purin bodies, they raise the blood pressure in a long, well-sustained curve, with an accompanying wave-like exudation of tissue lymph, and they are also like the other purins in being cardio-stimulants. According to my observation theobromin is much more powerful than caffein in its effect on the blood pressure. I have obtained the same pressure and lymph curve from tea, coffee, and cocoa as from their active principles, so that I am disposed to think that the latter embody the leading physiological effects of these beverages.

But this conclusion cannot be safely carried into our study of alcoholic beverages, for we find that the effects of alcohol on the blood pressure and lymph circulation are modified very considerably by the presence of other constituents in spirits, wines, malt liquors, &c. The pressure curve of absolute alcohol is an interesting one. There is first a fall and then a rise, the fall below the normal being equivalent to the rise above it. From the rise of the venous and the fall of the arterial pressure we may conclude that the capillary pressure is first of all augmented by the dilatation of the periphery of the circulatory mechanism, after which from the rise in both the arterial and venous pressures it is obvious that there is a recovery of tone in the distal vessels combined with cardiac stimulation which induces a secondary augmentation of the capillary pressure. This compound pressure curve determines two exudations of lymph separated by an absorption interval. The pressure curve of absolute alcohol, therefore, resembles that of creatin and differs from that of xanthin, uric acid, creatinin, and glycogen. Whisky follows the compound curve of absolute alcohol; brandy, wines, and beer conform to the simple curve of the bodies just mentioned; and gin follows the curve of hypo-xanthin. It is difficult at present to say what are the constituents in these beverages which alter the normal alcohol curve. Inasmuch, however, as absolute ether gives us simply the cardiac stimulant curve of xanthin, uric acid, &c., it may be suspected that the ethers present in wine exert this modifying influence.

I conclude from the foregoing data that caffein, theobromin, and the alcoholic beverages (but more especially brandy, wines, and malt liquors) are pressor agents like the purin and the other products previously mentioned.

HOW IS THE DIGESTIVE EXUDATION OF TISSUE LYMPH PRODUCED?

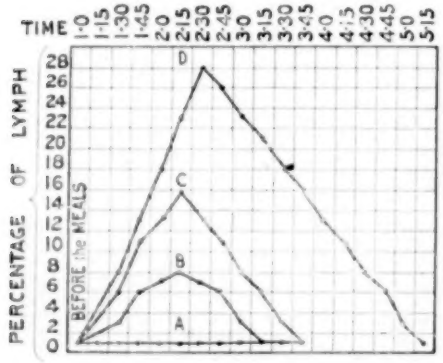
We are led by the foregoing data to the following conclusions: 1. That the food constituents themselves (proteids, fats, and carbohydrates) do not possess the power of starting the mechanism by which lymph is dispensed to the tissues throughout the body. 2. That nature, however, associates with our food-stuffs small quantities of certain very active substances which bring into play that mechanism, though these substances themselves are practically devoid of food value; and that man frequently increases this natural lymph stimulation by the use of salt and beverages containing bodies which also incite the flow of lymph. Now it may be admitted that all these substances (which might be termed exogenous lymph factors) may initiate the digestive lymph flow, but will they sufficiently maintain the prolonged wave-like effect, extending over three hours or so? According to the analytical data published by Dr. Hall,[1] whose recent valuable work on the purin bodies I have just read (my observations on this subject having been previously made), I calculate that the volume and duration of the lymph flow produced by the typical meals (see *supra*) are fairly proportionate to the estimated quantities of purin bodies present in the food. Therefore, it seems probable that the exogenous purins play a prominent part in causing the digestive disturbance of the circulation.

But let us put this matter to the test of experiment. It is possible to arrange a meal containing a fairly large quantity of nutrient elements in such a way that it will not react on the circulation at all and will not induce the flow of tissue lymph. Such a meal consists of three or more eggs, a full supply of white bread, boiled rice or tapioca, cream, sugar, and cheese, with a tumbler of cold water. I have taken this meal several times with the feeling of repletion and yet it has not produced a rise of blood pressure or the slightest flow of tissue lymph. This meal, free from lymph factors, forms a good basis for experimentation with sodium chloride, purin, and other products with the view of determining their influence on the lymph circulation. In Fig. 5 A shows the negative effect of this meal on the tissue lymph; B and C indicate two exudations produced by adding two and four grammes of sodium chloride to the meal; and D is a voluminous lymph wave resulting from the addition of a mixture of the following products with two grammes of salt: uric acid, 0·016 gramme; creatin, 0·033 gramme; creatinin, 0·033 gramme; xanthin, 0·016 gramme; hypoxanthin, 0·016 gramme; and glycogen, 0·048 gramme. The meal produced a much more refreshing and sustaining effect when the digestive lymph flow was excited by the

[1] The Purin Bodies of Food-stuffs and the Rôle of Uric Acid in Health and Disease, by I. Walker Hall, M.D. 1903.

addition of salt and more especially by that of salt associated with the physiological products than when taken alone.

FIG. 5.



A, lymph record from purin-free meal. B, purin-free meal with sodium chloride 2·0 grammes. C, purin-free meal with sodium chloride 4·0 grammes. D, purin-free meal with sodium chloride 2 grammes and uric acid 0·016, creatin 0·035, creatinin 0·035, xanthin 0·016, hypoxanthin 0·016, and glycogen 0·048.

It seems to me that these facts demonstrate that such bodies as uric acid, creatin, creatinin, xanthin, glycogen, and sodium chloride perform an important function in nutrition, for during digestion they act as distributers of lymph to all the tissues, an office which the nutrient constituents themselves (proteids, fats, and carbohydrates) are incapable of discharging. As inquiry goes forward it may discover other substances possessing this physiological property associated with our food elements. Nature has, with a wise intent, widely distributed these active chemical agents through most of our food-stuffs and beverages, thus turning even her waste products to the best account, the nutrition of the organism. Unfortunately, man, in his efforts to improve on nature, so often turns these benefactors into malefactors. Besides these lymph factors introduced from without there are supplies of the same materials generated within us. It will be shown, too, that exercise, sleep, and variations of temperature are important physiological conditions for the autogenous supply of tissue lymph. It is not improbable that in some subjects the endogenous production of lymph factors may exceed the physiological average, when an adjustment can only be effected by a limitation of the exogenous supply. But I am here touching the borderland between physiology and pathology, to which I hope to revert in the second lecture.

ABSTRACT OF AN

Address

ON

MEDICAL ETHICS.

Being the Presidential (Valedictory) Address delivered before the Medico-Ethical Association of Manchester on Jan. 27th, 1904,

BY D. LLOYD ROBERTS, M.D. ST. AND., F.R.C.P. LOND.,

PHYSICIAN TO ST. MARY'S HOSPITAL, MANCHESTER; CONSULTING OBSTETRIC PHYSICIAN TO THE MANCHESTER ROYAL INFIRMARY; AND LECTURER ON CLINICAL OBSTETRICS AND GYNÆCOLOGY AT THE OWENS COLLEGE, MANCHESTER.

IN the course of his introductory remarks Dr. Lloyd Roberts said that the Medico-Ethical Association of Manchester was the first organisation of the kind which was established and that the celebrated "Medical Ethics" of Thomas Percival was written in Manchester rather more than a hundred years ago. He referred briefly to various speculations on the philosophical basis of ethics and proceeded as follows:—

The great function of a medico-ethical association appears to me to be to assist in applying the rule of right in medical matters. It will, therefore, naturally endeavour (1) to impose a wholesome restraint upon the liberty of individual members of the profession in the interest of all, and (2) to assist in passing wise laws in those matters which relate specially to public health and the interests of the profession.

Let me first say a few words upon the restraints which the Medico-Ethical Association of Manchester has imposed upon the conduct of its own members. The chief restraint which finds expression in our laws relates to the prosaic and homely, but by no means unimportant, question of fees. It is as essential for the public as for us that our dignity should be maintained and we give to them the greatest guarantee that they will have honest and trustworthy services in the time of need by showing that we are a self-respecting and a disinterested profession. This society has been performing a public duty by insisting that its members shall claim fair remuneration for services rendered. That our tariff which has been drawn up by the society is a fair one is attested by the fact that it forms the basis of every scale of fees now in existence in this country. Our association has also done much to raise the character of the profession by inculcating a high code of honour in the dealings of members with one another. The laws of this code embody implicitly the hitherto unwritten rules which constitute the etiquette of the profession. This etiquette is indeed only a branch of the salutary discipline which society in general exercises over its individual members, and the restraint which our etiquette places upon those who follow their own supposed interests, regardless of the injury which they may inflict on their brethren, is a wholesome restraint and has been enforced by this society with a due measure of leniency and justice.

Many schemes of social advancement and reform which at the time of their inception were advocated in this very room have already found, and others will yet find, their embodiment in the laws of our country. The question of provident dispensaries was advocated in a paper read before the society nearly 50 years ago. Other subjects discussed in the early years of this society were medical education and the necessity of turning hospitals to good account for purposes of teaching. In 1869 this society advocated a reform of the lunacy laws. I need not tell you that from the point of view of the medical profession the lunacy laws are not satisfactory and I believe that the public are no more contented than we are with the present condition of these laws. In 1870 the "one-portal" system was discussed and pressed upon the Lord President of the Council. Shortly afterwards the direct representation of the profession in the Medical Council and the appointment of a Public Prosecutor were the subjects of interesting debate. Amongst other questions of interest which underwent discussion may be mentioned the means of notifying to sanitary authorities the occurrence of infectious disease, the duty of corporate bodies to provide for the isolation of infectious disease, the working of the Factory Acts, and the position of ship surgeons.

I would now direct your attention to the desirability of having a Minister of Public Health. A governmental sanitary department will always have plenty of work in dealing with the problems arising from overcrowding in cities, such as the limitation of infectious diseases, the disposal of sewage, and many other questions which directly relate to the public health.

Many years ago in this society attention was directed to the benefit that the State would derive were the medical profession represented in the House of Peers. This is now an accomplished fact. All honour to the distinguished statesman who was privileged to advise the Crown to elevate Lord Lister, the first medical peer, to a seat in the House of Lords. Surely no one is more capable to give advice to a government on a variety of subjects than a highly educated and experienced medical man. Medicine is based upon many sciences, and our profession is the only one which possesses a wide knowledge of the conditions on which much of the comfort and happiness of life depends.

Much has been said of late years of the political powerlessness of the medical profession and while not altogether sympathising with this cry I see no reason why influential corporations like the Colleges of Physicians and Surgeons,

with their numerous members practising all over the country, should not be represented in Parliament. We are not politically powerless. Although we do not care to take an active part in political agitations yet we greatly influence public opinion, and I am not sure whether our political power might not be diminished rather than increased by direct representation of the profession in Parliament. Action begets reaction and it is probable that a corporate representation would tell against us rather than in our favour. I have already advocated the appointment of a Minister of Public Health, but the powers intrusted to him ought to be exercised with great circumspection.

Much has been said regarding admission into the profession by the "one-portal" system and various views have been held by highly respectable authorities on this question. We have at present about 23 licensing bodies. The practical question is, Shall we abolish the existing powers of these institutions?—or should we content ourselves with enacting guarantees that they shall maintain the standard of their examinations at a sufficiently high level of attainments? In any scheme of State examination the standard of examination must be a minimum standard and the lowest prizes in the profession must fix it. The Government requires medical men for the navy and for the army and it would be impossible to make the standard of examinations so high as to exclude men who would be likely to accept such appointments. There are also parts of the country with widely scattered populations and no government will raise the standard of examinations so high that men will not be found to practise in those districts.

Opinions differ as to how far a government is justified in enforcing the practice of vaccination, in insisting upon absolute compulsory isolation in cases of infectious diseases, and in compelling corporations, property owners, and the public generally to observe wise sanitary laws. I do not believe that this country will ever turn its back upon the Vaccination Acts, but it will be well for the profession to be in readiness to advise the Government and the constituencies in this matter. In reference to the general isolation of the acute infective diseases, I believe it will be possible to obtain even more stringent regulations than we now possess as the people become more educated without the Government having to trench too violently upon the liberty of the subject. Sanitary regulations will be more carefully observed under the pressure of an educated public opinion without our being too ready to call out for coercive legislative enactments. Stringent laws, like every species of coercion, have a tendency to defeat themselves. A drastic sanitary law would at once call into being an anti-sanitation society, and it is only on condition that there was a strong educated and even uneducated public opinion in favour of the law that it would maintain its place upon the statute book.

Another subject which has received much public attention of late is over-pressure in schools. It is manifest that the pupils must possess a certain amount of intelligence before any teaching can be effective, and their faculties cannot be maintained and developed unless they are supplied with plenty of nourishing food and kept under healthy sanitary conditions. Underfed children cannot have well-developed faculties; therefore, they are not in the position to benefit fully by teaching, however perfect the method of instruction may be. In order to meet this difficulty it has been proposed to supply the children in poor districts with a free midday meal. This scheme must meet with our approbation so far as the poor children themselves are concerned, but we ought to insist, in my opinion, that the project should be carried out by the payment of the parents aided only by benevolent contributions and without the interference or assistance of the Government. Without this restriction the responsibility of parents in rearing their offspring will be greatly diminished or annulled and a species of communism will be introduced. With regard to the method of teaching now in vogue I believe that there is too much cramming in our present system, that words are divorced from facts, and that names are taught without giving the child any knowledge of the things indicated by them. Kindergarten methods of instruction seem to me to offer immense advantages over the time-honoured system of teaching children from written characters and words.

UNIVERSITY OF OXFORD: DEGREE DAYS.—Congregations will be held for the purpose of conferring degrees in Easter and Trinity terms on the following days—viz.: Thursday, May 19th; Thursday, June 16th; Thursday, June 23rd; and Saturday, July 9th.

EYESTRAIN AS A CAUSE OF HEADACHE AND OTHER NEUROSES.

BY SIMEON SNELL, F.R.C.S. EDIN.,
OPHTHALMIC SURGEON, SHEFFIELD ROYAL INFIRMARY; PROFESSOR OF OPHTHALMOLOGY, UNIVERSITY COLLEGE, SHEFFIELD.

OF all painful affections probably headache causes the most distress and misery. The individual who never experiences headache is one much to be envied. Fortunately there are many able to say this. On the other hand, there are many afflicted with headache causing constant or recurring suffering and only too frequently so disabling the sufferer that life to him or her becomes a burden. Life is shorn of its beauties and not only are its pleasures curtailed but the actual daily occupation is interfered with. A consideration of some of the causes of this suffering and the measures which may be adopted for its relief is well worthy of our attention.

It has, of course, for some time been understood that certain instances of headache bear some relation to eye defects. But the far-reaching effects of eyestrain and the relief afforded by the proper correction of refraction errors are not by any means as widely recognised as they demand. It is a matter that, in my opinion, admits of no question. The evidence is continually before one. Again and again is the same story told, first of the suffering and then of the relief afforded by optical aid. In my last 800 refraction cases in private practice I find that 162 suffered from headaches. I do not include in this number those making the usual complaint of discomfort for which hypermetropes and early presbyopes so frequently solicit assistance. In the cases to which I refer the patients have at once volunteered that they suffered from severe headaches or have stated on inquiry that they did do so. In the great majority this constituted the cause for seeking advice. In most, also, in varying degrees, were associated some or all of the train of symptoms to be described later.

Perhaps no more important work has been accomplished in the whole range of medicine and surgery than that of placing anomalies of refraction on a firm scientific basis. This we owe in the greatest measure to Donders and it brought to him undying fame. It is well known, too, that astigmatism, which has such a close bearing on our subject, was discovered by Thomas Young, the physician as well as the physicist. Sir George Airy, the astronomer royal, described astigmatism in his own case. It was of the compound myopic variety and was monocular. Here it is of interest to note that Airy was the subject of migraine and he described his own case in a paper in the *Philosophical Magazine* for 1865.[2] It may be remarked in passing that a proper correction of his refraction error, with the knowledge which we now possess, would in all probability have relieved him of his migraine, for he had both astigmatism and asymmetry in the refraction of the eyes, two very potent causes of headache as will be shown farther on. Airy's son, Dr. Hubert Airy, also published a very graphic description of migraine and the ocular symptoms in his own person[3] and it appears not unlikely from the account which he gives that he, too, would have been relieved, as has so often been the case in my experience in similar instances, if attention had been given to his eyes.[4] The interest that Young and Airy had in astigmatism was, however, physiological and not pathological. And even Donders lays stress always on the normal and abnormal astigmatism, the latter being astigmatism which interfered with the acuteness of vision. Our interest here is in the pathological significance of astigmatism and the subtle and powerful influences of eyestrain and not necessarily on its interference with visual acuteness. Frequently no complaint of vision is made and the error of refraction is only discovered after a careful and complete examination of the eyes.

[1] A paper read before the York Medical Society on Feb. 24th, 1904.
[2] Philosophical Magazine, July, 1865, vol. xxx., p. 19.
[3] Transactions of the Royal Society, 1870.
[4] He speaks of his attacks coming on after close eye-work, and says, "Usually after two or three hours' close reading, especially if I had insufficient exercise, I become aware that part of the letter I am looking at or a word at some little distance from the sight point is eclipsed by a dim cloud spot, &c." "Want of exercise, sedentary employment, close reading and writing are the usual antecedents. It generally comes on while the eyes are engaged with toilsome reading."

As far as I am aware the first to recognise clearly the close connexion existing between headaches and other neuroses with eyestrain was the distinguished physician and writer, Weir-Mitchell of Philadelphia. In a series of articles he urged the importance of a proper understanding of this relation. The views which he set forth are so well expressed and have such a practical bearing that they may still be read with profit[5] by those interested in the subject. He recognised that the distant symptoms may be the indication of eyestrain when no complaint is made of any defect of sight and this is a point of the greatest practical moment. He cites several cases from his experience and says of them "that the cases just told seem to me enough to prove that the eyes may long rest unsuspected as the cause." I make here the following quotations:—

My consultations have plainly enough taught me that hardly any men in the general profession are fully alive to the need of interrogating the eye for answers to some of the hard questions which are put to us by certain head symptoms, since many of the patients treated successfully by the correction of optical defects never so much as suspected that their eyes were imperfect. What I desire therefore to make clear to the profession at large is:—1. That there are many headaches which are due indirectly to disorders of the refractive or accommodative apparatus of the eye. 2. That in these instances the brain symptom is often the most prominent and sometimes the sole prominent symptom of the eye troubles so that, while there may be no pain or sense of fatigue in the eye, the strain with which it is used may be interpreted solely by occipital or frontal headache. 3. That the long continuance of eye troubles may be the unsuspected source of insomnia, vertigo, nausea, and general failure of health. 4. That in many cases the eye trouble becomes suddenly mischievous owing to some failure of the general health or to increased sensitiveness of brain from moral or mental causes.

Lauder Brunton some years ago[6] also very forcibly pointed out that the cause in many cases of headache must be sought in some irritation of the sensory nerves. It was to be found in the teeth, eye, throat, and nose. He makes references to the teeth as starting irrritation of sensory nerves and does so with excellent illustrations. He then says:—

Perhaps a still more frequent source of headache than even decayed teeth are abnormal conditions of the eyes. The headache which comes on after working with the microscope or after straining the eyes in a picture gallery is only too well known. It is usually frontal, often extending over the whole breadth of the forehead but sometimes limited to the forehead above one orbit. It would be going too far to say that frontal headache is always due to an abnormal condition of the eyes, but I believe it is so much more frequently than one would at all suspect. ..... But frontal headache is not the only one which may arise from abnormal conditions of the eyes, for megrim or sick headache is very frequently associated with, and probably dependent on, inequality of the eyes, either in the way of astigmatism, myopia, or hypermetropia.

Since this time others in this country have written on the subject, notably the late Mr. H. B. Hewetson of Leeds. But in America it has received much more careful notice than in this country. Recently Dr. George M. Gould of Philadelphia in able articles in THE LANCET[7] and the *British Medical Journal*[8] has called attention to the effects resulting from eyestrain and the treatment which they demand.

Before going on to the consideration of the class of cases with which this paper is chiefly concerned a few words may be said about migraine, for many instances of this disorder in which the classical symptoms are present will be relieved by giving attention to ocular errors. Two medical friends who have been closely associated with me have experienced an almost entire absence of the disorder since their astigmatism was corrected. One of these had several attacks of typical migraine. The last attack, which brought him to me for examination, he thus describes:—

I went to the ward to do a sugar determination. I then found I could see only the right half of the meniscus at the top of the fluid. In ten minutes (I noted the time) a black star appeared in the centre of the field. It lasted about 30 seconds and then enlarged; the vision in the centre of the field cleared and towards the left side of the field there appeared the fortification spectrum. It lasted like this for 20 minutes, flickering all the time and moving away from the centre. For an hour after this there was some headache on the right side. This was intensified by lowering the head to use the stethoscope, coughing, and contracting the scalp muscles. There was no tenderness of scalp. For several hours afterwards there was a dull pain in the right occipital region on coughing or lowering the head.

In May, 1902, he came to me and I found myopic astigmatism (− 1 D. with 0·25 D. cyl.) in the left and myopia (− 1·5 D.) in the right eye. He wore the correcting glasses constantly and had no further attack of migraine until a year later. Then an attack followed his leaving off the glasses for reading in the evening. He again took to the use of the glasses constantly and no further attack has occurred.

The other case was the following. A youth, aged 14 years, began to have typical attacks of migraine which were always precipitated by reading. At the age of 22 years he was ordered convex spherical lenses which gave practically no relief. At the age of 25 years I carefully estimated his refraction under a mydriatic. In the right with + 1·5 D. sph. and + 0·5 D. cyl. vert. V. = ⅔; in the left with + 1 25 D. sph. and + 0·5 D. cyl. vert. V. = ⅔. Cylindrical in combination with spherical lenses were prescribed and gave the greatest relief. He still continues to have migraine but the attacks are transient and at much longer intervals. He can now read and write for hours at a time without fear of precipitating an attack. The correction of the astigmatism has been most marked in relieving the nausea and dyspepsia.

The headaches, however, which we have now to consider belong to a different category. It will be well, therefore, to specify in some detail the situation and character of the headache met with, together with other associated symptoms. The pain may be frontal, across the forehead, or just above the eyes, limited to the supra-orbital region or reaching to the hair. This frontal situation is perhaps the most common. It may also be in the temples. It may be between the eyes and at the root of the nose (fronto-nasal). The pain is frequently paroxysmal and called neuralgic or it may be a more dull continuous pain. Usually it is bilateral but it may affect chiefly one side, one eye, one temple, or one side of the forehead. When this is the case it is often described as neuralgia, especially when affecting the eye. Unilateral headache is often associated with astigmatism on that particular side, whilst the other eye may be normal in refraction or have ametropia of less consequence. Pain may be at the vertex and this is a frequent seat. It may be a dull continuous pain or it may be of a dragging character. One lady described it as if an "iron claw was gripping her head." The occiput is another situation where pain is localised. It may extend down the nape of the neck to the spine. A lady referred to the pain as if a large crab had seized her by the nape of the neck, whilst another said the feeling was as if thousands of strings were in the back of the neck and as if someone was pulling them. In some the pain is confined to the neighbourhood of the eyes, forehead, or temple, whilst in others it may be associated also with vertical or occipital pain. It may, moreover be continuous, lasting for long periods, or it may be intermittent. Some speak of never passing a day without suffering whilst others may have a headache daily or be free for portions of the day; others suffer once or twice a week and others again only at longer intervals. The pain is sometimes relieved by pressure over the most painful part. Giddiness is a frequent complaint in these cases, causing often such a tendency to fall that it necessitates keeping very quiet and is a reason for seeking advice. Associated with headache not infrequently is a feeling of misery or apathy, a dulling of interest in things. One gentleman mentioned his "inability to think," but cylinders of + 0·25 D. aided him greatly in this respect. Irritability of temper, too, is mentioned. Insomnia is a frequent complaint and it is interesting to notice how speedily natural sleep returns after relief has been afforded by correcting glasses. Sleep is spoken of as not restful, as being often disturbed by dreams and nightmare. The general effect on the nervous system is such that a "nervous breakdown" is spoken of. A lady wrote to me respecting her cook who, she feared, was getting her brain affected, and yet this, together with constant headache, yielded to attention to the eyes.

Blinking and winking are, it is well known, not infrequently met with, especially in children with eyestrain, and these symptoms disappear when the ocular defects are corrected. Less frequent are choreiform-like movements affecting not only the eyelids but the muscles of the face and even the occipito-frontalis. A young patient, suffering in this manner, recently under my care, yielded at once when his hypermetropia and astigmatism (R. + 2 D., L. + 1·5 D. with + 1 D. cyl. vert.) were corrected, whereas several months of

[5] The references and titles of the articles are: *a*, Medical and Surgical Reporter, July 25th and August 1st, 1874: "Headaches from Heat Strokes, from Fevers, after Meningitis, from Over-use of the Brain, from Evestrain." *b*, Ibid., Feb. 6th, 1875: "Notes on Headaches." *c*, American Journal of the Medical Sciences, April, 1876, pp. 365-73: "Headaches from Evestrain." For these references I am indebted to Dr. George M. Gould's able and instructive volume entitled "Biographic Clinics." He there gives copious extracts from Weir-Mitchell's articles.

[6] St. Bartholomew's Hospital Reports, vol. xix., 1883, p. 336, &c.

[7] THE LANCET, August 1st, 1903, p. 306: "The Ill-health of Richard Wagner."

[8] Brit. Med. Jour., vol. ii., 1903, pp. 663 and 757: "The Rôle of Eyestrain in Civilisation."

medical treatment had failed to benefit. Vomiting and nausea are common symptoms. The former may be severe and lasting and attended with much retching. It may render a patient prostrate and necessitate confinement to bed. More frequently nausea is complained of, a sickly feeling after using the eyes. Indigestion is often mentioned or ascertained on inquiry. These patients frequently present an anxious, worn look and the difference, when relief has been afforded to the distressing symptoms, is evidenced often very clearly in the facial expression. The symptoms differ often considerably in each patient.

It has been mentioned that nausea and vomiting are met with not infrequently in these cases. This is of considerable interest, for it is well known that they are prominent and well-recognised symptoms of some eye diseases. An attack of acute glaucoma is ushered in with severe pain in the eye and the head and attended with violent vomiting. The bilious attack is such a prominent symptom that it masks the eye condition. It therefore receives attention; the eye is unheeded and treatment of the glaucoma is frequently deferred until sight is lost. If the reverse plan had been adopted and an iridectomy performed or even eserine instilled a clearing up of the general symptoms would have followed and the eye would have recovered its sight. Vomiting and the so-called "bilious attack" would have ceased on the relief to the increased tension of the globe which the measures mentioned would have brought about. Another example may be given. Increased tension of the eyeball is indicated in injuries to the crystalline lens or when a needling operation for cataract has been performed, not merely by pain in the eye but often by vomiting. Here, again, removal of the swollen lens is followed by immediate relief to the stomach symptoms. The disturbance of the pneumogastric nerve by these conditions is well recognised. It is not difficult to understand that the attempts of the ciliary muscle to overcome defects should similarly influence the pneumogastric nerve. It must be borne in mind that the ciliary muscle is perhaps the only muscle the action of which is continuous. Sleep is the only time for recuperation.

The remedy for the condition met with in these cases is attention to the eyes. Over and over again in my experience, relief has been afforded by the correction of anomalies of refraction. Frequently a patient expresses regret at not having obtained relief before instead of wasting time upon other measures. Usually no other treatment is necessary. A faulty state of the eyes is ascertained; it is corrected, the proper glasses are worn, and relief follows, whilst the other conditions of life have been unaltered. This is proof sufficient. It has been well said:—

> If use of the eyes produces any of these results it is almost surely the cause; if disuse of the eyes relieves, it is doubly sure; if without the disuse of the eyes wearing of proper glasses does the same, the demonstration is beyond question (Gould).

In many cases which come before one, however, the symptoms have already existed for a long period and immediate relief from the wearing of the correcting glasses cannot be expected any more than that a chronic disease should at once yield to any treatment which may be adopted for it. If anyone wishes to learn what the astigmatic eye has through the ciliary muscle to overcome he can do so by placing + or − cylinders before his eyes. Let him wear these glasses and they will produce the symptoms of ametropia. To illustrate, though imperfectly, the indistinctness of type which a low degree of astigmatism occasions if uncorrected by the action of the ciliary muscle I have had a series of photographs taken of a portion of a *Times* leader. First, the leader was photographed in the usual way and appeared sharp and clear. Then, under precisely the same conditions, the same was again photographed but close to the lens of the camera a cylindrical glass was placed. In this way a series of photographs was taken with + 0·25 D. cyl.; + 0·5 D. cyl.; and + 0·75 D. cyl. respectively before the lens of the camera. A second series with similar minus cylinders was taken. In each case the cylinder was so placed to occasion the effects of an astigmatism "according to rule." The eye naturally strives after a clear and sharp image and as this can only be accomplished by the action of the ciliary muscle the photographs[b] will be understood as illustrating the strain which the astigmatic eye must undergo to accomplish this result.

The following cases may be given as illustrations of those we have under consideration. The first is that of a lady who had suffered for a considerable time. She is the wife of a medical practitioner at a seaport on the east coast and he has very kindly written the following account for me.

> The patient, aged 32 years, had studied music until she was 21 years of age, spending five years in hard study in Germany. There were no eye symptoms then except headache occasionally. When working for a concert five years ago she began to have attacks of giddiness and occipital headache. These ceased after the concert but returned with increased force 12 months later when she was again working up for a concert. On this occasion she had one or two attacks of sickness. Improvement again took place. A few months afterwards she had some lessons in London and practised hard, ultimately having a complete breakdown from headache, giddiness, and nervous attacks. Then she gave up playing but for a long time her general health was poor. She was thin, did not sleep well, and was very nervous. She developed a cough and consulted a well-known physician nearly two years ago. He found no organic disease but ordered her to feed up. Her general health improved somewhat and then she began to have the typical attacks which brought her to you. The attacks came at first once a fortnight and gradually increased in frequency until she had one every week. They came on quite suddenly sometimes when she had been feeling particularly well. She first felt giddy as if she would fall and at the same time felt sick and faint; vomiting soon followed and lasted for several hours with severe straining and retching. After an attack she was prostrate and confined to bed for 24 hours. Occipital headache was frequent and severe as if a large crab had seized her by the nape of the neck. Occasionally an attack would come on with startling rapidity, almost like an epileptic attack. On one occasion I remember she was sitting at lunch chatting and quite cheerful. Suddenly she became quite giddy and nearly fell off the chair. She was pale and faint and had to be assisted to a couch. In a quarter of an hour she was vomiting. The worst attack she ever had came on during the night when in bed. The slightest attempt to lift her head from the pillow brought on frightful nausea and giddiness. After consulting you and wearing the glasses you prescribed she had several attacks during the first four weeks but they did not culminate in vomiting, and she has not had an attack of vomiting since (excepting once she had a bilious attack from eating some indigestible food; on this occasion there was no giddiness and she was "comfortably sick"; in an hour or two she was well). The attacks of headache and giddiness gradually disappeared and she is now free from any trouble of this kind. Her general health is good and she is stouter. In every way there has been a marked improvement. For a time attendance at a theatre was invariably followed by headache and giddiness, or a long carriage drive would induce an attack, but now they simply produce a slight tired feeling. Hearing has always been acute and there has been no ear trouble. During the worst attacks the nausea was so severe that the headache was unnoticed; there was, however, a feeling as if thousands of strings were in the back of the neck and as if someone were pulling at them. The giddiness always commenced in the occipital region."

The refraction ascertained after using a mydriatic was as follows: R. − 0·75 D. = $\frac{6}{9}$, L. −1 D. = $\frac{6}{9}$, axes vert.

The next is a more acute case and is one of considerable interest apart from the question of his headaches, for five years ago, when studying at the Sheffield Technical College the patient was struck in the right eye by a splinter of steel which penetrated the globe and became imbedded in the retina near the optic disc. I was successful in removing this particle of steel with the electro-magnet; he recovered perfect sight which, as the record now shows, has been permanent. The patient, aged 27 years, is an engineer and lecturer on electrical engineering at a technical school in a great midland city. He has always been a hard worker and the following is an account of his work during the last few years.

> From September, 1900, to May, 1901, he studied and lectured in the evenings. Considerable organ playing (music readings). August to October, 1901, engaged in engineer's drawing office (eight and a half hours a day). October, 1901, to September, 1903, two years' research work involving accurate reading of moving spot of light on m.m. scale; 50 readings in one and a half hours two or three times a day for several weeks. Plotting results on fine m.m. squared paper, &c. Nearly whole time spent in artificial light (electric arc), most of work being done in the evenings. September to Christmas, 1903, reading and lecturing. There was no serious difficulty experienced with eyes during the whole of this time except that there was sensitiveness to strong light, which was considerable on waking and when the eyes were tired with reading. The eyes also watered on changing to a colder atmosphere and there were slight headaches and except just before Christmas, 1903, slight occasional sickness necessitating careful dieting. He had a fortnight's holiday last Christmas (1903), during which time he did no reading whatever nor other eye work. This rest did not altogether give relief, so that when he returned to work he was worse than he had ever been before. For the last two or three years he noticed that his head felt "muzzy" and it was not even recovered by the morning. The eyes would be sensitive after a hard evening's work and watered a good deal. Even when interested in his subject he was disinclined to go on with reading owing to feeling sick and had to go out for a walk for an hour or more. He has been in the habit of giving his eyes complete rest whenever possible and always so on Sunday, on which day no reading has been done for three years.
>
> After the holidays he resumed work on Jan. 4th, 1904, and read hard for five hours. On the 5th he read hard for seven or eight hours and lectured in the evening. The following day after breakfast he began to feel dizzy and could eat but little (not to be accounted for by the system being out of order nor improper food). On the 7th everything appeared to be in a state of vibration. He kept his bed all day. Much vomiting. Had no food. On the 8th he was about the same; had no food but got up for an hour. On the 9th he was able to eat a

[b] Lantern slides were shown to illustrate this.

small piece of fish. On the 10th he came downstairs at noon and had light diet. His medical adviser prescribed a tonic. He had to be assisted upstairs on account of dizziness. On the 11th, 12th, and 13th he came down about noon daily. On the 14th diet about normal; went out of doors for the first time but was dizzy, otherwise felt well. On the 15th and 16th the dizziness slowly decreased. On the 16th he came to Sheffield and consulted me. On the 17th dizziness was still less. The eyes were absolutely at rest from Jan. 7th to 17th. He has not complained so much of headache. The feeling in his head was more of general muzziness, with occasionally acute pain in the eyes and forehead. The dizziness, he mentions, is that he feels about to fall and everything around seems to be swimming.

The refraction in this case was R. + 0·75 D. cyl. 60° = $\frac{6}{9}$; L. + 0·75 D. sph. = $\frac{6}{9}$. Subsequently he gave this report:—

I am glad to say that I am now in normal condition having worn the glasses continuously as you advised. The dizziness gradually disappeared and during the last few days I have been quite free from any indications of weakness, although I am doing a considerable amount of extra work owing to the illness of one of the lecturers here. Am doing a third of his work (lectures, &c.) in addition to my own. Once or twice I have tried the effect of not using the glasses for an hour or two but this gave rise to headache and acute pain at times in the right eye, not prolonged. Also the dizziness began to return.

It has already been mentioned that of the last 800 refraction cases in my private practice 162 sought advice in consequence of headache more or less conforming to the types which have been described—that is to say, about 1 in every 5. Dr. A. E. Barnes, a late clinical assistant of mine, has very kindly collected from my private case books 318 consecutive cases and has prepared for me the following analysis.

TABLE SHOWING AGE, SEX, AND AMETROPIA IN A SERIES OF HEADACHE CASES.

Age.	Sex.		Total.	Hypermetropia.			Hypermetropic astigmatism (simple and compound).			Myopia.			Myopic astigmatism (simple and compound).			Mixed astigmatism.		
	M.	F.		M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
5 to 10	4	2	6	1	2	3	1	—	1	—	—	—	1	—	1	1	—	1
10 „ 15	9	15	24	4	11	15	3 (2)	4 (1)	7	—	—	—	1	—	1	—	—	—
15 „ 20	3	36	39	—	12	12	2	19 (10)	21	—	1	1	—	2	2	1	2	3
20 „ 25	8	44	52	3	15	18	3 (1)	23 (9)	26	—	—	—	1	5	6	1	1	2
25 „ 30	4	52	56	1	14	15	1 (1)	34 (20)	35	—	1	1	2	2	4	—	1	1
30 „ 35	7	39	46	2	14	16	3	20 (11)	23	1	1	2	1	7	8	—	1	1
35 „ 40	2	26	28	—	10	10	1	13 (7)	14	—	—	—	1	1	2	—	2	2
40 „ 45	2	13	15	—	5	5	—	7 (3)	7	—	—	—	2	1	3	—	—	—
45 „ 50	6	11	17	—	4	4	3 (2)	5 (4)	8	—	—	—	3	1	4	—	1	1
50 „ 55	—	4	4	—	1	1	—	2 (2)	2	—	—	—	—	1	1	—	—	—
Over 55	—	1	1	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—

The age was not mentioned in 28 cases—4 of hypermetropia, 23 of hypermetropic astigmatism, and one of myopic astigmatism. The figures in brackets denote the number in which there was anisometropia.

Sex.—Females predominated largely. This was especially the case in hypermetropia and hypermetropic astigmatism. In myopic astigmatism this preponderance was much less. The following figures illustrate this point. Of the total cases 84 per cent. were females; of cases of hypermetropia 89·4 per cent. were females; of cases of hypermetropic astigmatism, 89·4 per cent. were females; of cases of myopic astigmatism, 64 per cent. were females. The preponderance of females is hardly to be wondered at. Women are more subject to neurotic conditions than men. The mental or nervous stress more rapidly affects them. Their nervous system is less stable. Women have more constant close eye work than men and their lives are passed more indoors than men. They have more leisure for reading and spend much of their time in sewing and fancy work—the latter and "bazaar work" often being responsible for a breakdown and a visit to the ophthalmologist. It is the eyeworkers, whether male or female, that are prone to headaches and the train of other neuroses which have been mentioned. These have been illustrated in the cases which have been related.

Age.—The youngest case was that of a boy, aged six and a half years. His refraction was R. + 1·5 D.; L. − 0·75 D., axis vert. Some time previously he had undergone tenotomy for convergent squint. There were two girls, aged seven years, one had H. + 1·5 D. and the other H. + 1 D. in each eye. The oldest was a woman, aged 60 years, with one available eye. L. − 1 D. with cyl. − 0·75 D., vert. approx.[10] The next in age was a man, aged 52 years, with simple hypermetropic astigmatism, + 0·75 D. cyl. in each eye according to rule (approximately). In males the ages at which eyestrain headaches are most prevalent correspond to three periods of life—i.e., puberty, from ten to 15 years; age of greatest stress, from 20 to 25 years; age when accommodation is failing, from 45 to 50 years. Myopic astigmatism is again different to the other errors, for five out of 11 cases were over 35 years of age, corresponding to the last period. In females the prevalence belongs to the period of sexual activity, for they begin to be common at 15 years, reach a maximum at from 25 to 30 years, and finally disappear at 50 years.

As to the relative frequency of the different kinds of ametropia it was found that the kind of error most associated with headache was hypermetropic astigmatism. Pure hypermetropia was nearly as common, myopic astigmatism much less common, mixed astigmatism still less common, whilst myopia was only present in four cases, and in three of these there was also anisometropia. The analysis of 300 cases gave the following results: hypermetropic astigmatism, 49·3 per cent.; hypermetropia, 34·3 per cent.; myopic astigmatism, 11·3 per cent.; mixed astigmatism, 3·6 per cent.; and myopia (three of which were unequal in the two eyes), 1·3 per cent.

Of particular interest in this analysis of cases of headache and errors of refraction associated with them is the large number of cases in which the degree of astigmatism is a low one and the cylinder prescribed correspondingly weak. There is in some quarters a failure to recognise the importance of estimating these low degrees of astigmatism and the value derived from the use of weak cylinders. A careful study of the subject, however, will easily demonstrate that the low degrees of astigmatism play a very important rôle in the causation of the neuroses we have under consideration. They will be found in patients complaining little, if at all, of their sight and can only be detected and the exact axis ascertained after a careful examination when the eye is under the action of a mydriatic. I refer especially to astigmatism of 0·25 D. and 0·5 D. Included in my series were 144 cases of hypermetropic astigmatism, simple and compound. I find that + 0·25 D. cyl. was prescribed in 18 cases of simple and five of compound hypermetropic astigmatism, or 23 cases altogether; + 0·5 D. cyl. was prescribed in 38 and 9 respectively, or 47 cases; and + 0·75 D. cyl. was prescribed in 22 and eight respectively, or 30 cases, thus making a total number of 100 out of the 144 cases in which cylinders of + 0·75 D and under were prescribed. The benefit of these weak + cylinders was undoubted. There were also 34 cases of myopic astigmatism, simple and compound. For these cylinders of − 0·75 D. and lower were ordered in 20 cases—viz., − 0·25 D. cyl. in three simple and one compound, or in four cases; − 0·5 D. cyl. in four simple and two compound, or in six cases; and − 0·75 D. cyl. in nine simple and one compound, or ten cases. The percentage for these weak cylinders works out as 66·8 per cent. for hypermetropic and 58·8 per cent. for myopic astigmatism. The following is a case illustrative of the

[10] "Approximately" vertical or horizontal is used as indicating that the axis approaches one or other of these meridians. This suffices for our purposes here, but in testing, the axis must be determined exactly if relief is to be afforded.

value of weak cylindrical lenses. It has been related before and is epitomised here.

In consequence of long continued and severe headaches a gentleman, a missionary in the East, consulted me in October, 1901. The headaches had commenced about February, 1899, after considerable stress of work. They began on the left side, to which they were chiefly confined, sometimes beginning about the eye and at other times about the teeth. At first there was a sort of hot feeling which, after a time, gave place to a more acute pain, apparently like neuralgia. When pain was absent there was a numb feeling reaching from the left side and top of the head to the occipital region. The feeling was as if one side of the head was boiling hot or in flames and he lost all energy. His sight was tested by a medical man and declared to be *above normal*, and the complaint was designated "hemicrania," "cause undiscovered" being put in the certificate. It was suggested at this time that his teeth might be responsible and he consequently had two extracted from the upper jaw. As a result of this examination he was invalided to another part of the country for six months but he was able to do some work. The change and comparative rest were beneficial and he was able to resume regular work in the autumn of 1899, continuing it until the beginning of 1901, when the headaches recurred. He was treated without avail by another medical man who regarded the headaches as rheumatic. In February, 1901, he left for England, arriving in this country in the middle of April. He was then brought before the medical board who ordered six months' rest, at the expiration of which time he was re-examined. The headaches still remained at that time but were somewhat modified in severity. The principal medical officer could not diagnose the cause and advised him to see an ophthalmic surgeon. He therefore came to me. At his visit I found that, though suffering from headache, it was not so bad as previously. The numb feeling was constant and there were exacerbations of more acute pain. He was of opinion that the headaches were made worse by exertion, but as he was unable to use his eyes with comfort he believed they had a good deal to do with his suffering. Vision in each eye was normal ($\frac{6}{6}$) and glasses rendered it worse. After being under the action of homatropine and cocaine in each eye V. = $\frac{6}{9}$, or with + 0·5 D. cyl., axis horizontal, $\frac{6}{6}$. The muscle balance appeared to be normal. These cylinders were ordered and a week later he reported himself as improved and better than he had been for a very long time. He also added that the numb feeling in the head disappeared when wearing the glasses but returned on leaving them off. He mentioned an interesting fact that two days previously after a bicycle ride the pain in the head returned and he wished to know if cycling would be injurious. He had cycled a good deal when in the East and thought the pain had been aggravated thereby. I explained the way in which it might be so and was informed that he had been in the habit of leaning forward, and consequently, on looking straight in front of him, he would have to use and strain the elevator muscles and discomfort would be caused in the same way that "academy" or "sightseers'" headache is occasioned by looking at pictures hung above the line. At a later call he stated that he had received considerable relief and was anxious to return to work and desired my permission for him to accept a curacy in the south of England. He was able to read with much greater comfort than formerly. He also said that he was satisfied as to the cause of the strain to the eyes when cycling as he had put himself in the position I had explained and he found the eyes to tire very soon. On Nov. 22nd I again saw the patient who expressed himself as better and more fit for work than he had been since he first commenced his labours in the East. He was able to read with comfort for long periods and felt confident of being able to fulfil his clerical duties which he was to enter upon the next day. Later he obtained permission to marry and to return to his work in the East.

Anisometropia, or an inequality in the refraction of the two eyes, is another feature to be noticed and it is important. One eye may be myopic and the other hypermetropic, or both may be myopic or hypermetropic, but the degree may be higher in one of the eyes or the degree of astigmatism may be unequal in each eye. Moreover, one eye may be normal and the other may have some form of ametropia. A consideration of my cases shows that inequality of the two eyes was present in nearly half (45·6 per cent.). It was most frequent in mixed astigmatism (81 per cent.). Myopia came next with 75 per cent. and myopic astigmatism with 74 per cent. In hypermetropic astigmatism it was present in 55 per cent.; in hypermetropia only in 21 per cent. In compound astigmatism, both hypermetropic and myopic, it was more common than in the simple varieties. In hypermetropic astigmatism the axis according to "rule" should be horizontal and in myopic astigmatism it should be vertical. There is but little evidence from my cases to show that astigmatism against the rule is especially potent in causing headaches. In hypermetropic astigmatism there were only nine cases against, or approximately against, the rule (i.e., about 6 per cent.). There were also 14 cases in which there was astigmatism against the rule combined with inequality of degree, but as anisometropia is such a powerful factor in the production of headache these cases can hardly be used to show that departure from the rule is also a factor. In myopic astigmatism there were no symmetrical cases against the rule where there was not also inequality of degree, but there were nine cases in which there was also this inequality of degree. If we do not take account of these cases in which one eye only was astigmatic we find that there were 13 cases of hypermetropic astigmatism in which the axes were not symmetrical. This is not quite 10 per cent. In myopic astigmatism there were nine cases, or nearly 25 per cent.

The correction of these conditions without glasses could only be brought about by an effort of accommodation differing in the two eyes and this, it is thought, the eyes are hardly capable of doing to any great extent. Where the difference is considerable the inconvenience is not always great and persons often only become aware of the fact that they do not see equally well with each eye when the tests for vision are applied. In a case like that of Mrs. ——[11] in which there were myopia and amblyopia (V. = − 10 D. with − 1·5 D. cyl. $\frac{6}{24}$) in the right and hypermetropic astigmatism (+ 0·75 D. cyl. = $\frac{6}{9}$) in the left, the chief factor in giving relief to her headaches probably was the correction of the astigmatism in the left, though a minus spherical glass with a cylinder was at the time prescribed for the right. In other cases the effort to accommodate with each eye will be made, especially in low degrees of asymmetry, and this endeavour is often attended with considerable discomfort and headache, &c., and is an important factor in occasioning the distressing conditions which we are discussing.

If relief is to be afforded in these cases it is of the utmost importance that the refraction should be carefully and thoroughly worked out. To accomplish this the use of a mydriatic is essential. It has been pointed out that many of the greatest sufferers make no complaint of their eyesight and unless therefore the accommodation is paralysed and the exact refraction ascertained relief will not be afforded. For this purpose homatropine, especially in combination with cocaine, is usually sufficient.[12] I generally employ it made up in gelatin discs. If these are used two or three times at intervals of ten or 15 minutes a patient is ready for examination at the lapse of from one and a quarter to one and a half hours. The next day the effect has passed off sufficiently for the patient to be able to read with his correcting glasses. A mydriatic will reveal a latent hypermetropia of one, two, or even three dioptres not infrequently in those aged 38 years, 40 years, or even more, and the low degrees of astigmatism will not be discovered without it. Homatropine used in the way already mentioned usually suffices, but its employment has in some cases to be repeated daily.

Retinoscopy is the one objective method that is of real value. Its discovery has rendered immense service to refraction work. For young children it must often be relied on for ascertaining the degree of the error and it may often be necessary to prescribe spectacles from its findings. For all others, however, the final examination must be made with the trial glasses and test type cards. No objective method can be permitted to dispense with these. Ascertain carefully the best correcting glasses and be very exact as to the axes of the cylinders. Attention to these matters is essential if our treatment is to be successful.

It must not be forgotten that whilst an error in the refraction is responsible in the main for the headaches and other conditions in these cases there nevertheless is in some added

[11] "Before wearing glasses I used to suffer constantly from headaches and often felt nervous and irritable, with occasional shooting pains in the head and a sensation of being thoroughly run down. The use of glasses has given me quite a restful feeling and I have had but very little headache since wearing them. I feel very grateful for the good they have done me and my general health has considerably improved." Extract from letter of Mrs. ——.

[12] Homatropine and cocaine, $\frac{1}{60}$th of a grain of each.

thereto a faulty condition of the muscle balance of the eyes. This, though secondary, is still an important factor and the latent deviation must be carefully ascertained by the use of Maddox's rod and tangent scale. The close relation between the external ocular muscles and the accommodation is such that it suffices not infrequently, after careful testing, to relieve the ciliary strain by the appropriate glasses. The muscle balance becomes rectified or of less account. This is not, however, true of all cases and the adaptation of prisms must then be combined with such correction as the refraction error requires. Exophoria, or latent divergence, is the condition most frequently met with. It occurs much more frequently than the opposite condition or esophoria. It is often present in myopia and in the comparatively few instances that headache is associated with myopia, apart from astigmatism and anisometropia, it may be regarded as the cause. Tenotomy of the external recti is sometimes indicated and is of service. The following case illustrates well the benefit of taking into account the muscle balance as well as correcting the ametropia.

Twelve months ago a medical student came to me from Scotland. His headaches were so intense and so constant that study was almost impossible; his examination had been postponed in consequence and he was considering relinquishing his medical career, at all events for a time. He had previously consulted two ophthalmic surgeons; each had prescribed glasses but neither had ascertained the refraction as revealed by a mydriatic. He had accordingly received no benefit. Homatropine and cocaine were used by me for two days. The refraction then was R. + 0·75 D. sph. with + 0·25 D. cyl., axis vert.; L. sph. + 0·75 D. These were ordered for general use and later for the exophoria which was present prisms 1°, base in, for each eye were prescribed. These gave complete relief; he soon wrote that he was able to do a normal amount of work and that he was preparing with confidence for his final examination. This he was successful in passing. The following is an extract from one of his letters:—

> The prisms seem to have worked almost a miracle. I do not, of course, wish to depreciate the other factors, yet the most marked difference occurred after the prisms were worn. I am now able to read the whole day and about two or three hours in the night, a pleasure which has been denied me for more than three and a half years. The terrible photophobia, conjunctivitis, constant headaches, and utter mental depression have all disappeared. I feel quite a different person. While not expecting to have the eyes I had five years ago it is quite an unspeakable felicity to be able to read as much as I do now and cover the work of the examination which lies before me. It is impossible to realise that for periods of three months at a time I was hardly ever free from severe headaches, that I was unable to look at a book for six weeks at a time, and that this state of sublimated mental and physical torture lasted for some years.

At the close of last year he wrote saying he had ceased for a time to use the prisms, wearing the correcting glasses alone, but as he felt the old symptoms returning he was taking to the prisms and again finding the same relief.

Vertical deviations are less frequent than lateral, but in my experience they have been associated with severe headache. One case was that of a nurse who was frequently laid up and who had been obliged for a time to give up her occupation. I found in the right eye mixed astigmatism (+ 0·75 D. vert., — 0·25 D. horizontal) and in the left simple hypermetropic astigmatism (0·75 D. vert.). Glasses were ordered combined with prisms correcting the vertical deviation. Very considerable relief was experienced.

A word now as to "academy" or "sightseers'" headache or, as it is called in America, "theatre headache." There is no doubt that astigmatism or some other form of ametropia is a factor in its production. But a proper correction of such defects will not always prevent this kind of headache and I feel certain that there are other important influencing conditions.[13] A lady mentioned that she suffered so much from headache after attending a play that she ceased to think a visit to the theatre was worth the after-suffering. It was also ascertained that she visited the pit and it was the effect of looking up at the stage that she found distressing in its after-effects. When sitting in the dress circle and looking on to, or down to, the stage she experienced less ill results. My investigations into the conditions causing the nystagmus, or rolling of the eyes, met with in miners showed that it was due to the weariness induced in the elevator muscles of the eyeball by the constrained position in which the miner had for long periods together to cast his eyes when engaged in working the coal. My observations in compositors, plate-layers, and many other occupations, indicated, moreover, that prolonged use of the elevators tended in them also to produce nystagmus but that in many instances only discomfort and aching of eyes were complained of. I believe, also, the cause of academy headache is in many cases to be found in this throwing the gaze above the horizontal line, especially without a corresponding uplifting of the head. Watch the visitors to a picture gallery and it will be observed how often this turning upwards of the eyes is required, especially when the paintings are hung above the line, and careful observation will show that many of the same visitors will compensate for this movement above the horizontal by a backward motion of the head. Anyone may try this for himself and observe the tiring effects occasioned by looking at pictures more or less skied and then notice the difference of looking at the same objects but relieving the elevators by at the same time throwing the head backwards. The collier with nystagmus learns to steady his eyes by turning them downwards. And it will have been noticed that the lady before referred to had herself observed the difference in looking up at the stage from the pit and looking down from the dress circle. Cyclists suffer from this kind of headache, particularly those who lean on the handle-bars with the head lowered, when if they look forward the gaze is necessarily directed above the horizontal line. I have already related a case in which a return of the headache resulted from a rather long cycle ride. As already stated, on questioning the patient it was found that he was in the habit of looking in the direction I have suggested as occasioning the weariness of the elevators and consequent headache. The accuracy of this observation he was able to endorse from tests which he made himself. I mention this particularly because I think that it is an explanation of the headache or eyeache sometimes complained of by cyclists and the cause once recognised admits of easy remedy.

We may summarise what has been written under the following conclusions: 1. That eyestrain is the cause of a large proportion of headaches, often of a very aggravated character. 2. That various other neuroses are met with in association with headache and among these may be mentioned the following: mental depression, nausea, indigestion, vomiting, insomnia, giddiness, choreiform movements of the eyelids and face, &c. 3. That relief is afforded to these conditions by correcting the error of refraction which can be ascertained only after careful examination. 4. That for such examination a mydriatic is absolutely essential. 5. That frequently no complaint is made of defect of vision. 6. That the ametropia is frequently of low degree, 61·2 per cent. of my cases needing 0·75 D. cyl. and weaker. 7. That a cylinder of 0·25 D. is of great value. 8. That anisometropia is frequently present and requires proper adjustment. 9. That in a certain number of cases the muscle balance is faulty and necessitates the prescribing of prisms.

Sheffield.

[13] Acquired Nystagmus in Occupations other than Coal Mining, Transactions of the Ophthalmological Society, vol. xvi.

THE TREATMENT OF MUCO-MEMBRANOUS COLITIS.

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THE study of muco-membranous colitis has been largely extended of late years owing to the publication of numerous works, principally in France (Potain, Dieulafoy, Gaston Lyon, A. Mathieu, de Langenhagen, Froussard, and others). To-day the description of this disease to be really clear and complete needs a development that far exceeds the space available in a medical journal. Hence I am obliged to limit myself in this paper to presenting to the English medical profession the aspect of the question exclusively in its relation to the *treatment* of the disease, leaving to the authors mentioned above the history, symptomatology, complications, etiology, and pathogeny of the disease. It is, however, necessary that before I begin I should present a succinct clinical picture and give in a few short paragraphs my personal ideas which may be found in a more complete

form in the little book that I published in London last year.[1] Muco-membranous colitis is a chronic catarrhal inflammation of the mucous membrane of the large bowel. It is a constitutional and diathetic disease, neither parasitic nor contagious. The soil in which the disease takes root and spreads is a constitution both gouty and neurotic—i.e., the neuro-arthritic constitution that is so common to-day and so largely increased and developed by the conditions of modern life, the repetition of hygienic errors, heredity, overstrain, and the heated atmospheres of large cities. To say to what extent respectively these two arthritic and neurotic elements are associated with the genesis of the disease would be difficult, as it varies according to each individual case. With certain persons it is the arthritic element which predominates and the physician may generally observe that in this case the colitis is less severe and more easily curable. In other cases there is, on the contrary, a predominance of the neurotic element and the physician has to deal with veritable neurotics who have lost their nervous equilibrium and whose case has been probably one of a primitive nervous trouble of the whole sympathetic system of which the catarrh and intestinal atony form merely a portion of the factors. From a symptomatic point of view muco-membranous colitis is essentially characterised by very pronounced intestinal atony and by a more or less abundant secretion of a mucoid or membranous matter. If the mucus is expelled as it forms it appears in the form of glairy threads analogous to the white or yellow of an egg and occasionally tinged with blood; if, on the contrary, it remains in the folds of the intestine it dries up and shows itself as a membraniform production of varying aspects (ribbons resembling segments of tænia, vermicelli, macaroni, and the like). The intestinal atony manifests itself by obstinate constipation, generally anterior to the signs of catarrh, and it is precisely the prolonged constipation which in the end brings about the mechanical irritation of the mucous membrane, its superficial inflammation, and the hyper-secretion of its glands. Nevertheless, alternations of constipation with diarrhœa are often found and exceptionally permanent diarrhœa.

To these two fundamental elements of the disease may be added a third which is but seldom absent—and that is pain. I have classified this as follows: either habitual pain with the sensation of a weight and a dull discomfort, generally seated in the iliac fossa and making itself most generally felt four or five hours after meals, or pain in paroxysms, very violent attacks which last some days and oblige the patient to take to bed and which are often taken for an attack of hepatic colic or of intestinal stoppage. The pains correspond to a state of spasm of the large bowel, more or less violent and more or less generalised. Objectively we regularly see in patients suffering from colitis a flabbiness and depressibility of the abdominal wall and a remarkable state of atony and laxity of certain segments of the large bowel, particularly of the cæcum, which feels like a more or less swollen sausage. On the other hand, the sigmoid flexure is generally contracted and forms a sort of string. Very often there is a general bearing down of the bowel or enteroptosis. Functional troubles of the stomach and the liver (flatulence, dilatation, hypochlorhydria or hyperchlorhydria, oligocholia or polycholia) accompany the intestinal symptoms and sometimes obscure them to such a degree that medical men not familiar with colitis see in their patients simple dyspeptics. Intestinal lithiasis is a frequent complication and shows itself by the presence of sand in the fæces.

The question of the relation of appendicitis to muco-membranous colitis is too important and too much a subject of controversy for me to treat of it briefly; the reader will find it dealt with in my book. The general condition is ordinarily much altered; there is a marked loss of flesh. With women troubles of the uterus or of the uterine appendages often complicate the situation. The nervous condition is always accentuated; there are various reflex phenomena (cardiac intermittences, palpitations, dizziness, attacks of dyspnœa or of suffocation, fainting fits, and the like). There is a general weakening of the nervous system, even to the point of most pronounced neurasthenia, for it must be remembered that if these patients are generally of neurotic origin the colitis, once it has a hold on them, reinforces and exalts the previous neuropathic phenomena.

[1] Muco-membranous Entero-colitis. By Maurice de Langenhagen, M.D., Consulting Physician at Plombières. London: J. and A. Churchill. 1903.

Such is, in outline, the sketch of this tedious disease, the treatment of which I now proceed to consider in detail. There are some fundamental precepts which dominate the therapeutics of the disease. The practitioner must make sure that the patients have a diet suited to the state of their intestine. He should be most careful to keep the bowel open and to procure by appropriate artificial means the evacuation of the residuum that the bowel, owing to its atony, is incapable of expelling by itself. He should also attempt to modify the intestinal catarrh and, to a certain degree, the fundamental neuro-arthritic diathesis. There are three principal therapeutical means corresponding to these three indications: they are rather of a hygienic than of a medical character, and I now proceed to examine them successively. They are (1) the alimentary regimen; (2) the washing out of the intestine, and (3) the hydro-mineral treatment.

1. *The question of diet* is there of supreme importance. The problem consists in nourishing the patient in such a way that the excrement shall neither be abundant nor irritating. The food should be chosen from amongst the following aliments: milk, meat soups (chicken and other) with every particle of fat taken off, beef-tea, porridge made of barley, oatmeal, maize, ground rice, arrowroot, raccahout, &c.; eggs, boiled, scrambled, or in custards, but neither fried nor as omelets (as fat is to be avoided); white light fish—i.e., sea fish boiled, or if fried the skin and all the parts imbued with fat should be taken away; finely minced, very lean roast and boiled mutton or beef or veal or chicken; sweetbreads and brains. Vegetables mashed very fine and passed through a sieve may be given. As a rule it will be found best to give only dry pulse vegetables, such as dry haricot beans, peas, and lentils; mashed potatoes may also be given, *but on no account should any green vegetables be allowed;* for it has been remarked that as a rule the greater number of persons affected with colitis do not digest green vegetables. Even when finely chopped they pass through the intestinal tube and thence into the fæces without having been through any digestive action; they are expelled in the same state as they were eaten. Besides which, the consumption of green vegetables does not, as is sometimes supposed, diminish the constipation in the least degree. Nor can the daily enema or laxative be dispensed with because green vegetables form part of the diet. The part which they are said to play as "balai de l'intestin" is quite an illusion in the cases we are dealing with. Not only are they useless—they are harmful, inasmuch as they encumber and fatigue the already jaded atonic intestine by stagnation, producing fermentation and thus increasing the catarrh, the irritation, and the glairy secretion. Therefore it is necessary to forbid rigorously all spinach, cabbages, salads, and all raw fruits (exception to be made in those rare cases where experience shows that they are tolerated and normally digested and assimilated). Stewed or baked fruits without skins may be allowed, also boiled and baked batter puddings and custards. Very little bread should be taken and that little should be eaten stale or toasted dry. Wine and all alcoholic drinks should be absolutely banished. Alcohol acts like a poison on the intestinal canal and is always harmful. The best drink is pure, fresh, spring water or a very light table beer mixed in equal parts with a slightly mineralised table water. Milk does not suit all stomachs; it frequently disagrees when it is given in too large quantities at a time, but given moderately, associated with the above regimen, it is generally digested and it has rarely to be excluded from the patient's bill of fare. All fatty matter should be strictly forbidden and all pork except very lean ham. No game, crabs, lobster, crayfish, or other crustaceans should be allowed. All hashes, stews, rich gravies, sauces, and pastry of every kind should be forbidden. In serious or inveterate cases greater severity still is needful. Patients should in these cases take nothing but milk (if tolerated), light cereal porridges, eggs, beef-tea, and sometimes a very little finely minced raw meat. In cases where milk is not digested warm infusions such as those of camomile and lime tree bark may be given. They are very comforting in cases of dilatation of the stomach or of dyspepsia. Bread should be strictly forbidden in these cases or should only be given in very small quantities in the form of rusks or dry breakfast biscuits.

2. *The washing out of the intestine.*—The means which I consider the least harmful to the patient for resisting the intestinal atony—independently of the special modification

which it exercises on the mucous membrane—is the methodical and carefully calculated irrigation of the large bowel, an irrigation that is to be as complete as it possibly can be. I am not unaware that in recommending this means I am tilting at a prejudice against the use of enemas that is widely spread in England. But I must repeat, the bathing of the intestine, as I understand it, is not a simple "enema" destined only to assure the evacuation of the rectum. If this were the only object in view one could let each person follow his personal preference and adopt one of the numerous well known laxatives, even though they might have the disadvantage of fatiguing the stomach, of sometimes causing colics, and of losing their effect in the end. Of these laxatives the one that I prefer is castor oil in small doses (from one to two teaspoonfuls); then there are cascara sagrada, calomel, euonymin, belladonna, podophyllin, rhubarb, and magnesia. Abdominal massage can also be employed and electrical applications, but we must remember that these last have often only a momentary effect and that if the patient is obliged to use them repeatedly they become too expensive to be within the reach of everybody. As regards the enemas of olive oil (from 50 to 200 grammes taken at night when going to bed and retained the entire night), they are generally insufficient in themselves to empty the bowel and in addition a water enema is obliged to be given the next morning. But it cannot be too often repeated, the expulsion of the fæcal matters is not the sole object of the intestinal irrigation, which has for its aim and effective result the cleaning out, the scouring so to speak, of the intestine by ridding it of the mucus and the false membranes which stay in its folds and adhere to its walls. This irrigation has even the effect (by bringing in contact with the intestinal walls a warm liquid endowed, when the irrigation is done at certain thermal resorts, with special properties that either reduce the congestion or, on the other hand, stimulate the muscular tissue) of re-awakening the contractibility of these walls, of modifying the mucous membrane, and of influencing the secretion of the glands—in one word, of doing not merely a mechanical work but a modifying work that is really curative and therapeutic. *The intestinal bathing should therefore be considered as a real internal dressing of the mucous membrane* and this explains why it is suitable not only in the cases of colitis with constipation but also in those cases where there are alternations of constipation and of diarrhœa or in cases of chronic diarrhœa. It goes without saying that I only allude to intestinal bathing correctly performed and that I have no wish to take up the cudgels for these bathings badly done—e.g., with too strong a pressure or an exaggerated quantity of liquid. As far as that goes the technique of these irrigations is simple enough and after the first few times the patient can easily acquire habitude to them. In the most ordinary case—that of muco-membranous enteritis in a chronic form, without any great contraction and with obstinate constipation and an abundant glairy secretion—this is how I proceed.

The irrigation is given by means of a fountain-injector containing two quarts and fitted with a long indiarubber pipe, from one metre 50 centimetres in length to two metres, and terminating in a supple cannula of red indiarubber, from 30 to 40 centimetres in length and from ten to 12 millimetres in diameter, pierced near the extremity by two holes, lateral and opposite to one another, so that if one of the orifices becomes stopped up by a plug of fæcal matter or mucus the other remains free. The injector should be placed at a very slight height above the bed on which the patient lies—at the most at from 25 to 60 centimetres—so that the pressure is extremely low, and the tap should be only slightly opened, so that a very slow discharge of the liquid (about ten minutes for a quart) may be assured. The water used for the irrigation should be water previously boiled, to which can be added or not some softening substance, such as linseed, marsh-mallow root, or some medicated substance, such as boric acid, naphthol, ichthyol, &c. The water should be of a temperature varying from 35° to 48° C. A temperature of about 35° C. is best suited to cases in which there is a tendency to spasm and to "resistance" on the part of the bowel; the temperatures of 45° C. and above are most useful when there is complete atony without spasm and where the physician is desirous of stimulating the muscular tissue and re-awakening the contractibility. The quantity of water to be injected varies from one quart or even less to one and a half quarts, according to the patient's power of tolerating it and the extent to which he can accustom himself to it. The patient should be lying on his back at the beginning of the operation, should then turn slightly on his right side, and should finish by lying entirely on his right hip so that the liquid penetrates to the furthest parts of the colon. For it is these furthest parts—the end of the transverse colon, the corner between the ascending and the transverse colon, and the cæcum—that the fæcal matters choose for accumulating in; and there, most often, is to be found the principal seat of the catarrhal inflammation and the most active centre for the production of the mucoid matter or membranes. Hence it is there that the cleaning process should act. It is for this reason that I always recommend if possible the arriving by degrees at large quantities of liquid, but I only increase the quantity when the patient is well accustomed to the previous dose. On principle I begin with three-quarters of a quart and augment progressively up to one and a half quarts or at the maximum one and three-quarter quarts at a time. As a general rule I prefer that the patients should have two consecutive irrigations, the first destined to rid the bowel of its fæcal contents and the second to carry away the mucus and act on the mucous membrane previously cleaned. The first irrigation should be expelled after one or two minutes and the second after nine or ten minutes if possible. But in many cases when the patient can obtain a stool before the operation (and this is an attempt always to be recommended) or when there is only a small quantity of mucus to be evacuated, or when the fatigue that ensues after the irrigation is too much accentuated, I content myself with one irrigation. For the same reasons, instead of one *séance* every day, the operation may be performed only two or three times a week. All this is an affair of tact, of degree, and of individual indications. It cannot be too much insisted on that here I only cite the average, that the prescription for the irrigation is not universally applicable, and that the different conditions of pressure, of temperature, of quantity, and even of the nature of the liquid injected should vary notably, according to the particular form and degree of intestinal atony, according to the tolerance of the patient, according to his neurotic condition, and according to the action which the physician wishes to obtain: simple evacuation of the fæcal matter, antiseptic cleaning of the intestinal canal, awakening of the contractibility and of the energy of the muscular fibre, calming of the spasms and of the contraction, reducing of the pain, and modification of the catarrhal condition of the mucous membrane.

Objections have, however, been made to the method of intestinal irrigation but I consider the greater part of these criticisms much exaggerated. Still, as they have a specious appearance which has appealed to a certain number of medical men it is necessary to examine them in detail. I do not pretend that the method I recommend is perfect; I simply state that its disadvantages are in a minority compared to its advantages. I willingly recognise the fact that a certain number of persons are incapable of supporting the large intestinal irrigations which provoke, in their case, various troubles—very violent pains, nausea and vomiting, cold sweatings, sometimes even cardiac accidents and a state of syncope. But I must add, at once, that the number of these exceptional patients is extremely limited (hardly 3 per cent. in a total of several thousands). When the physician does meet with such cases it is evident that he must do without the irrigation. But this is no reason for depriving the large majority of other patients who are capable of supporting them. Is there one medical man who would give up the systematic use of drugs like iodide of potassium, antipyrin, belladonna, and the like, because some few persons cannot tolerate them? He would first make the attempt, ready to abandon it on perceiving some special idiosyncrasy; and it should be the same thing with the intestinal irrigations.

Treating these exceptional cases apart it has been said that the washings out, even when they are tolerated, have the disadvantage of dilating the bowel, of provoking spasm and contraction, of increasing the irritation of the mucous membrane and the production of glairy matters and of keeping up, and even adding to, the state of intestinal atony by not allowing the patients to do without them. There are almost as many errors and exaggerations in these propositions as there are words, for it is very rare to find spasms and contractions of the bowel provoked by the

irrigation. The contracting and shrinking of certain segments of the intestine, like the atonic dilatation of certain others, are normal phenomena in muco-membranous colitis, and they are seen just as much among the patients who do not use the irrigations as among those who do, which proves that it is an effect of the disease itself and not of the treatment applied. If, nevertheless, the irrigations do seem with some persons to augment the spasm and provoke painful phenomena, that is because more often than not they are given with exaggerated pressure or with a too great quantity of liquid. Given correctly, as I indicated above, they hardly ever provoke any noticeable pain. Still, one does sometimes observe a contraction, limited to the sigmoid flexure, and entirely due to the introduction of the cannula and to the local reaction it causes. A good means of avoiding this partial spasm consists in smearing the cannula with a pomade with belladonna or cocaine in it instead of simple vaseline. Just consider, how could the intestine be "dilated," that is to say, how could its walls be forced by the introduction at low pressure of a liquid which never completely fills the cavity which receives it? Take a pig's bladder and fill it by degrees with water. So long as this bladder is not swollen, until the liquid presses on its sides they will not be distended, nor suffer elongation, nor forced dilatation. Well, to fill the large bowel so as to distend it from the rectum to the ileo-cæcal valve we should need at least, according to the experiments made on dead bodies and living ones, from three to four quarts of liquid, and, as we have seen, we never inject more than one and three-quarter quarts at a time. Can it be admitted that this very moderate quantity of liquid which as it increases spreads itself without obstacle into the furthest portions of the intestinal tube can distend its walls, even allowing for the distension produced by the gases, which themselves, perhaps, partly dissolve in the liquid introduced, partly get through it, and are expelled with the residue of the irrigation?

Again, it is an absolute error to pretend that the washings out irritate the intestinal mucous membrane and increase the catarrh. This might be so if astringent or caustic solutions were used, but performed with water charged with softening substances or with mineral water of sedative properties they produce no irritation at all. The best proof is that the irrigations never cause an expulsion of glairy and mucous matters from persons who do not habitually expel them. This is an experiment that I have tried several times on healthy persons or patients suffering from simple constipation without accompanying colitis and always with the same negative result. We may conclude, then, if we find among patients suffering from colitis a larger quantity of mucous matter after the irrigations than at other times, that the mucus accumulated in the intestine, remaining there for some time and causing by its presence an intensification of inflammation, is expelled in larger quantity by the effect of the irrigation, for the well-being of the patient; they are already old productions and not new ones, which on reflection it will be seen could not form up instantaneously and suddenly.

The last reproach made against the irrigation, that of keeping up and sometimes augmenting the intestinal atony, contains more truth than the preceding ones. But I think this disadvantage makes itself but rarely felt, seeing that with the greater number of patients the intestinal energy was already lost when the treatment by irrigation was started and that these patients never went spontaneously to stool and only obtained evacuation of the bowel by a daily dose of cascara or castor oil. Consequently, with such patients the intestinal atony has not been increased by irrigation, seeing that it was at its worst before. Even supposing that some patients who had not yet lost all intestinal strength and who still had some spontaneous stools before the treatment by irrigation had while curing the catarrh (and all the inconveniences it causes, pains, nervous reflex phenomena, &c.) abolished what still remained of the function of defecation, that is a disadvantage very small compared to the advantages otherwise procured. I therefore conclude that the reasonable and persevering employment of intestinal irrigation is the chosen method for the treatment of colitis and that the greater number of the objections formulated against it are imaginary and without value, the only real one applying to a very limited number of patients. The total of cases in which the irrigations are useless or cause slight inconvenience certainly does not exceed 20 per cent., according to my statistics; and it seems to me the study of medicine should in strict duty concern itself with a therapeutical process which can count success in the proportion of four-fifths.

3. The third method of treatment of colitis is a hydro-mineral cure judiciously chosen. As far as my knowledge goes there does not exist in England a suitable resort for treating this disease. In France two resorts are now in vogue—Plombières and Châtelguyon. But their composition is widely different. Châtelguyon possesses temperate springs (27° C.) with bicarbonate and salt, slightly laxative and tonic. Plombières, on the other hand, possesses hypo-thermal springs (up to 72° C., average 50°) with bicarbonate and silicate of sodium, slightly arsenical. The waters were known to antiquity in the treatment of rheumatic affections and of diarrhœa of an arthritic or tropical origin; their employment for colitis is more recent in the same way as the knowledge of the disease itself. The consumption of the Plombières water by drinking produces neither constipation nor diarrhœa, still after the cure a diminution of constipation is generally noticed. In addition these waters are essentially sedative to the nervous system and reduce the congestion of the intestinal mucous membrane. It is to this triple property (general anti-rheumatic action, nervous sedative, and reduction of local congestion) that they owe their growing success in colitis—a disease, it should not be forgotten, of an essentially nervous and arthritic origin. Plombières, therefore, attacks the origin of the harm by modifying the constitution of the subject. Châtelguyon, on the contrary, is more efficacious against the symptom constipation. That is why I advise sending above all to Châtelguyon patients who are suffering from simple constipation without intestinal catarrh or with very little of it. Whenever the catarrh is intense and when the painful, neurotic, or neurasthenic phenomena are pronounced Plombières is preferable. When it is a question of the diarrhœic forms hesitation is not permissible—it is Plombières that should be chosen. One of the great advantages of Plombières on which I must again insist is the perfection of the apparatus for intestinal irrigation. This apparatus was established six years ago under my instructions. It consists of a bed with a mattress pierced by a basin with a hole for the escape of the fæcal matter and an irrigator of elongated form and of sufficiently large capacity in direct communication with the reservoirs of the thermal water. This irrigator is fitted at its inferior extremity with an indiarubber pipe to which can be adapted the patient's cannulas and is moveable the length of a graduated scale which serves to regulate the pressure. On its exterior it has a thermometer and a water-gauge graduated in quarts, half quarts, and quarter quarts. All the conditions of temperature, of pressure, and of quantity can be minutely regulated by the medical man and executed by the *employé* in charge of the apparatus and by the patient. This apparatus has been copied in other French thermal resorts, but they are less numerous and less generally employed than at Plombières. Thus Châtelguyon is, above all, a place where the patient drinks the water; Plombières, above all, a place where he takes baths and washes out the intestine. A cure at this resort has the great advantage of teaching the patient to perform the irrigation; he serves his apprenticeship at Plombières by the constant repetition of the same process, by the imitation of his neighbours, just as in a sanatorium the tuberculous patient learns the rest cure and the cure by aeration and over-nourishment and is able when he returns home to continue it because he has understood its importance and realised its practice.

But intestinal irrigation is not the only means in use at Plombières. By the baths the general nervous system is affected, is calmed, and the secretive activity and the painful phenomena are modified; by a wisely arranged hydropathic treatment the impoverished general nutrition is stimulated and the whole organism tonified. Lastly, massage, abdominal and general, is very often prescribed either to stimulate intestinal atony or to exercise a general tonic action. Kissingen has also a certain reputation in the treatment of intestinal diseases. But I consider this resort above all suitable in cases of diarrhœa, or, like Châtelguyon, in cases of simple constipation without a concomitant catarrh. For they are, in fact, cold salt waters exercising rather a tonifying, general, and local action. They are employed exclusively for drinking and bathing, the intestinal irrigations being unknown there. Vichy and Carlsbad can also be recommended, but with a

great deal of prudence. I consider it an error, too often perpetrated, to send to these stations habitual cases of colitis and I have more often than not seen patients suffer bad effects from them. They are only suited to cases where the dyspeptic or hepatic symptoms which exist at the same time as the intestinal phenomena are very pronounced; in that case a cure at Carlsbad or Vichy can alternate with a cure at Plombières or Châtelguyon.

Such are the three principal elements—a veritable therapeutic tripod—of the treatment of muco-membranous colitis. As may be seen, the means are exclusively hygienic, and what may properly be called drugs have not much to do with this treatment; they are almost always inefficacious, and sometimes even harmful, owing to the alcohol or other irritating substances that are often mixed with them. The physician is, however, obliged to fight against the painful phenomena that accompany colitis, for the patient asks for some relief. To this end belladonna in the form of suppositories should be used, or taken internally in the form of tincture or pills (one grain of the extract in five or six pills for every 24 hours), or frictions with an ointment containing mercury and belladonna can be given if a calming effect is desired, or with turpentine if a somewhat stimulating action is preferred. Very hot, large poultices, sprinkled with laudanum, placed on the abdomen also succeed very well; or in the same way applications of large compresses dipped in a very hot decoction of poppy heads, covered over with impermeable taffeta and with strips of flannel, and kept on the entire night. Indian hemp calms the intestinal spasms very well. A good elastic belt is necessary to hold and to lift up the abdomen in patients who have noticeable enteroptosis. The physician should be chary of using drugs against the dyspeptic phenomena that accompany colitis, since generally these troubles are lessened as the state of the intestine improves; but, according to the case, a little hydrochloric acid may be used, or alkalies, absorbent inert powders (charcoal, chalk, magnesia), and nux vomica.

ON THE REMOVAL OF THE GALL-BLADDER IN OPERATIONS FOR GALL-STONES.

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IN 1902 I read a paper entitled "A Series of Cases of Cholecystectomy" before the Yorkshire Branch of the British Medical Association. I gave then the following indications for the performance of this operation: (1) in injuries of the gall bladder, rupture, stab, or bullet wounds; (2) in gangrene of the gall-bladder; (3) in phlegmonous cholecystitis; (4) in membranous cholecystitis; (5) in chronic cholecystitis with dense thickening of the walls of the gall-bladder and cystic duct, with or without stenosis of the cystic duct, and in chronic cholecystitis when the gall-bladder is shrivelled and puckered and universally adherent (in such cases it is no longer a receptacle for the bile); (6) in distension of the gall-bladder, hydrops or empyema, due to blockage of the cystic duct by calculus, stricture, growth, or external inflammatory deposits, or in cases of mucous fistula following operations for these conditions; (7) in cases of fistula between the gall-bladder or the cystic duct on the one hand and the stomach, duodenum, or colon on the other; (8) in multiple ulcerations of the gall-bladder or the cystic duct when gall stones have eroded their way through the walls into the liver, the duodenum, or other protective adherent masses; and (9) in primary carcinoma of the gall-bladder. The result of my early cases was so satisfactory that I was led to put the operation to a more extended proof and as my experience increases I am tempted to ask whether it would not be the better treatment in all, or in nearly all, gall-stone operations to remove the gall-bladder entirely. The experience of every surgeon who has worked extensively in this field of surgery is that the chief purpose and the main indication in any operation for gall-stones is the drainage of the gall-bladder and bile-ducts. Of the validity of this experience there can be no question. We know that gall stones are rendered troublesome by the cholecystitis or the cholangitis which they are the means of arousing. In many cases it is because of the inflammatory consequences that an operation is demanded. The essential part of any operation would therefore seem to be the drainage of the gall-bladder, prolonged for such a time as to allow a complete subsidence of the inflammatory process. But in the very great majority of cases the secondary inflammation has its origin and runs its course entirely within the gall-bladder; an infection of the hepatic or common ducts does not occur. In many cases, therefore, in removing the gall-bladder we are doing away with the necessity for drainage by removing that structure the drainage of which seemed imperative. It is within the gall-bladder that the great majority of stones are formed; it is within the gall-bladder that the secondary inflammatory troubles break out and are, in the majority of cases, altogether limited. The removal of the gall-bladder, therefore, does away with the need for drainage. It renders less likely the formation of gall-stones and it renders less likely the inflammatory consequences of their presence. If, however, the need for drainage is absolute it is possible, in fact quite easy, to drain the ducts after the gall-bladder has been removed. After the division of the cystic duct the stump of the duct may be slit up until the hepatic duct is reached or the cystic duct may be cut off flush with the common duct. It is then quite a simple matter to explore upwards and downwards with a spoon or with the finger to make certain that the ducts are clear of calculi and then to stitch in, by a single catgut suture, a rubber drainage-tube. The presence of stones in the common duct does not debar one from removing the gall-bladder. In two cases I have removed stones from the ampulla of Vater by duodeno-choledochotomy and have then at once removed a chronically inflamed gall-bladder full of stones and, after dividing the cystic duct close to the common duct, have drained the latter with a rubber tube. Both patients recovered without the slightest interruption. The plea therefore that the need for drainage is opposed to the routine removal of the gall-bladder is answered by the fact that when the gall-bladder is removed the need for drainage does not often exist, as that need was due to the presence of the gall-bladder, and by the fact that if drainage of the ducts is desirable or necessary it can be carried out without the smallest difficulty.

An examination into the recorded cases of carcinoma of the gall-bladder and of the adjacent portions of the liver shows that in approximately 95 per cent. (Siegert) the malignant change is due to the chronic irritation of gall-stones. If the gall-bladder is removed there will, of course, be no chance of this malignant growth occurring. This is not, however, a point of much importance, for the cases of carcinoma are those in which no operation has been done; by the time the surgeon sees the case the growth is already there. To make the argument for cholecystectomy a strong one from this point of view it would be necessary to show that malignant disease occurred after cholecystotomy, and so far as I know this has not been done.[1] In the very great majority of operations for gall-stones there is ample evidence of long-standing inflammation in and about the gall-bladder. The normal smoothness of the gall-bladder is gone, its deep blue colour is lost, and its supple walls have become thickened and tough. A glance at a gall-bladder during other abdominal operations will tell one in a moment whether stones are lying there. If the gall-bladder is blue it is healthy; if opaque and grey or yellow there are, or there certainly have been, stones and a chronic inflammation aroused by them. In many cases, therefore, it will be concluded that cholecystectomy is the more desirable operation, but before its routine adoption is advocated it is necessary to show that the gall-bladder is useless and that its removal does not add any risk as compared with cholecystotomy. In the abstract one might be inclined to think that the loss of a bile reservoir capable of emptying on demand would be a serious matter to the individual or at the least a disability. The perfection of the mechanism of digestion so graphically told by Pawlow would seem to require that bile should be ejected in spurts, as it were, into the duodenum during digestion. But there is clinical experience in abundance to show that when all the bile is discharged from the body through an external biliary fistula, without a drop entering the intestine,

[1] A case of malignant disease of the gall-bladder after cholecystotomy has been recently recorded by my colleague, Mr. H. Lawford Knaggs, in THE LANCET of April 16th, p. 1054.

the individual suffers no sign of disability of any kind. There is abundant evidence also, furnished by my own cases and by many others, to show that the removal of the gall-bladder does not interfere with digestion, that the individual eats well, gains in weight, and to all appearance has the same duodenal digestion as an ordinary healthy individual. The gall-bladder, therefore, if not useless, can quite well be spared.

The removal of the gall-bladder does certainly not involve a greater risk than the operation of cholecystotomy. I have, in fact, in several cases been convinced that the removal of the gall-bladder made the operation simpler and shorter than it would have been if a multitude of small stones had been removed. By carrying out the operation in the manner described below it will be found a safe, speedy, and simple procedure. During the last two years I have inclined more and more to the performance of cholecystectomy, and after some hesitation and some trepidation, which experience has removed, I am strongly disposed to advocate the frequent, though not the invariable, adoption of this operation in preference to cholecystotomy. Its advantages are that the operation removes the chief source of the disease, that it thereby prevents in great measure a recurrence either of stones or of the inflammation which betokens their presence, that growths in the gall-bladder or adhesions around it are subsequently impossible, and finally, that the wound, if drainage is not required, may be caused to heal throughout by first intention. The gall-bladder is devoid of any strikingly useful purpose and its removal does not add to the danger of the operation. If drainage of the ducts is necessary it can be carried out quite satisfactorily. The presence of a stone in the common duct does not prohibit the operation, but drainage of the duct, after removal of the stone in the duct or in the ampulla, is necessary. The one disadvantage that may justly be urged against cholecystectomy is this: that if a late operation should become necessary—for stones can, and do, form in the hepatic and common duct—such an operation would be more difficult and almost certainly more dangerous. The possibility of a further operation being necessary cannot be denied but the likelihood of it is negligible. The list of conditions demanding cholecystectomy given at the beginning of this paper may therefore be considerably increased and made to include all cases, or almost all cases, of gall-stone disease requiring surgical treatment.

The operation of complete cholecystectomy is performed in the following manner. A vertical incision near the outer margin of the right rectus muscle is made and the muscle fibres are split. The usual length of this incision is five inches. If additional room be required it is best obtained by continuing the upper end of the incision along the costal margin upwards and inwards. All adhesions of the gall-bladder and ducts and liver having been cleared, the liver is rotated by gentle traction upon the gall-bladder until the cystic and common ducts are straightened and brought upon a level with the wound. By this manœuvre the operation is rendered simpler and quicker. The gall-bladder may now be removed from before backwards or from behind forwards. Latterly I have preferred to divide the cystic duct and to secure the cystic artery before freeing the gall-bladder. By dragging upon the gall-bladder the cystic duct is made clearly discernible. Its peritoneal investment is divided and stripped up along the duct towards the hepatic and common ducts, so that a cuff of peritoneum is raised up from the cystic duct. The latter is divided after securing it with a catgut ligature and the cystic artery is also defined and secured. The peritoneal cuff is then turned over the divided end of the duct and sutured. If it is intended to drain the common duct no ligature on the cystic duct is necessary. The cystic duct is cut off at its junction with the hepatic and common ducts and into the opening that is left a rubber drainage-tube is stitched. The gall-bladder is then stripped up from behind forwards. The separation from the liver is readily effected by stripping up with the finger around which a thin strip of gauze is rolled. The peritoneum which passes from the liver to the gall bladder is cut with scissors about three-quarters of an inch away from the liver, so that after removal of the gall-bladder the bared surface of the liver may be covered in by peritoneum. There is occasionally some bleeding from the denuded liver. This is readily checked by a suture or by the firm pressure of a hot swab or sponge. If the common duct is drained it is well to put in two other drains, one to the inner side of the duct towards the duodenum and one to the outer side towards the kidney pouch. These drains, whether of gauze or of rubber tubing, should be stitched in position by one or more sutures of catgut and they are left in for from eight to ten days. At the end of this time their removal is quite easy. It is necessary to stitch them in position in order to prevent them being moved away within a few hours on account of the constant movements of the liver during respiration.

Leeds.

NOTE ON THE CAUSES OF COUGH IN CHILDREN.

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THERE are many cases of ill-health occurring amongst children in which, although cough is a persistent symptom, the physician is unable to detect any abnormal physical signs in the chest and the usual expectorants are exhibited in vain. There is frequently vomiting in these cases and wasting and weakness may become so marked that life may be despaired of. The severer forms have been often called "consumption" or "decline," while the milder have received the names "bronchitis" or "bronchial catarrh," whereas, as I have indicated, neither the lungs nor the bronchi are at fault. Those cases where the cough is accompanied by spasm and a consequent "whoop" are put down at once as whooping-cough, may be treated as such for months, and frequently serious chest trouble ensues. Their non-infectious nature should be sufficient to guard against this error. In the large majority of these cases it is to the back of the throat, the tonsils, the fauces, and the pharynx that we must go for the *fons et origo* of the condition. A very slight degree of pharyngitis, of tonsillitis, or of adenoid growths in the naso-pharynx may produce cough in a child the reflex activity of whose nervous system is high. I desire to point out the frequency of the occurrence of one or other of these conditions in children suffering from cough and to recommend that the throat at least should be examined in every case.

Adenoid cough has been recognised for some time although in the existing text-books on diseases of children it scarcely receives the place it deserves and in some it is not even mentioned. Of 621 consecutive cases of cough which I have treated during the past two years, most of which were supposed by the mothers to be whooping cough and were brought to the Royal Waterloo Hospital as such, no less than 371 of the patients were suffering from tonsillitis, pharyngitis, or chronic enlargement of the tonsils, or from post-nasal adenoid growths in a greater or less degree, and most of them lost their cough entirely when the throat was put in a satisfactory condition. This proportion is high and probably is not applicable to many places outside London, or even to the healthier parts of London, but amongst the children living in the poorer districts of this city inflammatory conditions of the pharynx, tonsillitis, and adenoids prevail to an enormous extent, and it is a serious question for the Commission appointed to inquire into the causes of the alleged physical degeneration of our race what part enlarged tonsils and the presence of adenoids contribute to that result. At the Infirmary for Children in Liverpool the proportion of these cases was not nearly so high, due, in my opinion, to the different atmospheric conditions prevailing. The heavy, foggy atmosphere of London, holding, as it does, much organic matter and micro-organisms in suspension, especially in low-lying and overcrowded districts, would appear not only to initiate but to keep up a chronic irritation of the mucous membrane of the throat and pharynx, aided by an insufficient amount of vigorous exercises and the consequent enfeeblement of the circulation and defective development of the breathing apparatus. The great desiderata from this point of view are more and larger open spaces where children may be allowed to play and realise that they are really children (and not, as it were, pocket editions of men and women), where they can flush out their air passages with an approach, at any rate, to pure air and thus counteract to some extent the pernicious effects of the atmosphere in which they must perforce live and work.

The medical treatment should be on the following lines. In cases where there are signs of any acute inflammation and where there are no obviously enlarged tonsils or adenoids present the back of the throat should be treated antiseptically, in the older children by gargling, in the younger by spraying; sometimes chlorate of potassium given internally has a good effect and also various antiseptic lozenges may be given. If anæmia be present iron should be prescribed. Sedatives are often necessary to counteract the extreme reflex irritability and the *habit of cough* that is sure to have been formed. The bronchi may be affected secondarily and then it may be necessary to administer one or other of the ordinary expectorants. If not much debilitated, instead of being kept quiet indoors, the child should be encouraged to take vigorous exercise in the form of games in the open air. For girls the use of the skipping rope is a valuable exercise. Where practicable change of air is to be recommended and, indeed, may be the only treatment required in mild cases. Where there are adenoid growths present or markedly enlarged tonsils they should be removed as soon as possible, followed by the treatment detailed above. Carious teeth should also be attended to, for the throat is frequently infected from them. In some of these cases the cough departs immediately after the operation. A case is before me of a child who had a distressing cough for four months; the adenoids were excised on June 27th and by July 10th the mother merely came up to the hospital to report that the cough had entirely ceased and that her child was perfectly well.

Waterloo-road, S.E.

A CASE OF ATTEMPTED DIVISION OF THE EIGHTH NERVE WITHIN THE SKULL FOR THE RELIEF OF TINNITUS.[1]

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(*With a Report on the Resulting Degeneration by* DR. E. FARQUHAR BUZZARD, *Pathologist to the National Hospital, Queen square; Assistant Physician, Royal Free Hospital.*)

THE patient was a female, aged 23 years. In February, 1898, she developed left otitis media which was quickly followed by a mastoid abscess. The abscess after being opened soon healed but the discharge from the ear continued. In October of the same year the mastoid was opened and a more or less complete operation was performed. The result being unsatisfactory, in July, 1899, and again in March, 1900, the patient was admitted to St. Thomas's Hospital and more bone was removed; on the latter occasion the cavity was grafted. In spite of this the discharge continued, necessitating a further removal of bone and granulations in December, 1901. On this occasion also the unhealed surface was covered with Thiersch grafts. After this operation the discharge ceased and the whole cavity completely healed. For a year all went well but at the end of this period pain was experienced in the posterior part of the mastoid process. In addition to this the patient began to suffer from tinnitus and vertigo. On admission on August 18th, 1903, she was anæmic and complained of giddiness, noises in the ear, and a pain over the left mastoid and in the course of the small occipital and auriculo temporal nerves. The external auditory meatus and the middle ear were represented by a large smooth cavity lined with healthy white skin. The bony labyrinthine wall was intact. One of us made the following note of the condition of the left ear. "When speaking in a loud tone directly into the left ear, after closure of the right, sounds are heard but no words can be distinguished. A loud-ticking watch is heard only when placed in contact with the remains of the left mastoid. On the right side the same watch is heard at a distance of 24 inches. A tuning fork placed on the forehead is heard on the right side only; when placed on the point of the chin the fork is heard slightly on the left side but quite distinctly on the right; the tuning fork is not heard at all when held immediately opposite the left meatus and only just heard when placed on the left mastoid. In the right ear the air conduction is considerably better than that of the bone, though slightly shorter than normal. The noises in the ear ceased on compression of the left common carotid artery." There were two tender spots behind the ear: one at the junction of the posterior border of the mastoid process with the skull and the other at the lowest part of the same border. The amount of tenderness varied considerably but could always be elicited on pressure. There was no œdema or sign of acute inflammation. The pain radiated in the distribution of the small occipital and auriculo temporal nerves but its severity varied greatly. The tinnitus was entirely confined to the left ear, sometimes being compared to the rushing of water, at others to the sound of bells; it was always present but was most noticeable at night, especially if the patient lay on the left side. Its severity had increased to such an extent that sleep was seldom obtained without the use of hypnotics and even with these it was broken and disturbed. The vertigo was of the type usually met with in Ménière's disease; when an attack occurred the ground seemed to rise towards the face of the patient. There was no inclination to fall to one side or the other, nor did objects appear to pass from left to right or *vice versâ*. The patient never dared to venture outside the house without a friend by her side.

The general condition of the girl was pitiable and it was evident that unless something was done she would soon be worn out by want of rest. She was quite convinced that the causes of her trouble were the noises in the ear and that compared with these all other symptoms sank into insignificance. Drugs were tried with absolutely no result and it seemed that the only recourse left was division of the auditory nerve, for we decided that, although the noises ceased on compression of the common carotid artery, it was not advisable to ligature that vessel since the results obtained by this operation were not satisfactory in the cases reported by Meyerson[2] and Grunert[3] (in the former case the noises returned after four hours and in the latter after four months), while in the case reported by Linsmayer,[4] who ligatured the external carotid artery, the noises ceased only for a short time, but hemianopsia and deafness of the same side with hemiplegia of the opposite side developed, and at the necropsy on the patient, who died on the fifth day from pneumonia, extensive recent softening of the hemisphere was found. With this end in view we undertook numerous experimental operations on the cadaver.

There are two routes through which the auditory nerve can be reached within the skull: (1) by exposing the cerebellum in the usual way, opening the dura mater, and slowly compressing the cerebellum inwards until the facial and auditory nerves come into view; and (2) by the operation for exploration of the posterior surface of the petrous portion of the temporal bone. This is an elaboration of the ordinary operation for the cure of mastoid caries. After consideration it was decided to adopt the second of these routes. We were influenced in our decision by the fact that a large amount of bone had already been removed and also by the fact that there were still pain and tenderness at the posterior border of the mastoid process pointing to some abnormal condition in these parts.

Description of the operation on the cadaver.—The complete operation for mastoid caries was first performed, the lateral sinus being exposed and the posterior meatal wall being removed down to the level of the facial canal. The dura mater over the temporo-sphenoidal lobe was next exposed and by working backwards and downwards from this point the dura mater over the cerebellum for a distance of three quarters of an inch behind the lateral sinus was laid bare. This was found to be necessary in order to gain space for retraction of the cerebellum in the later stage of the operation. The portion of the temporal bone forming the inner wall of the mastoid was next removed, starting from the groove for the lateral sinus and extending forwards and inwards as far as the horizontal semicircular canal and the remains of the posterior wall of the meatus.

[1] A paper read at a meeting of the Clinical Society of London on March 25th, 1904.

[2] Versuchungen der Deutschen Naturforscher und Aerzte, 1895.

[3] Archiv für Ohrenheilkunde, Band xxxv.

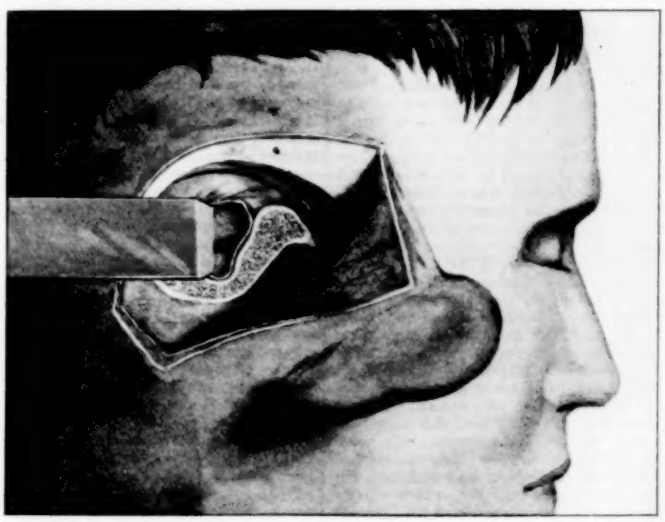
[4] Politzer's Diseases of the Ear, fourth edition, p. 778.

The extent of dura mater in front of the lateral sinus exposed by this means was found on an average to be three-eighths of an inch (Fig. 1). The anterior edge of the exposed part of the dura mater was then incised to the extent of about one inch. A flat retractor half an inch broad and bent on the flat to a convenient angle was introduced and the cerebellum was compressed until, with the aid of a forehead light, the auditory nerve was seen running obliquely into the internal auditory meatus (Fig. 2). The depth of this nerve from the cut edge of the petrous bone varied in different bodies from a half to three-quarters of an inch. Approached in this way, the facial nerve cannot usually be seen, as it lies deep—that is, internal to the auditory—but occasionally as the two nerves appear from behind the cerebellum the edge of the facial nerve can be seen just behind (above, speaking anatomically) the auditory. Pressure on the auditory nerve applied as near the brain as possible enables the facial to be brought into view; a blunt hook can then be easily passed round the eighth nerve without damage to the facial. The auditory nerve can then be divided either by traction or by the scissors. On the cadaver the operation is not difficult and

FIG. 1.

First stage of operation. The bony walls of the antrum and attic have been entirely removed. Anteriorly is seen the tympanum, and posteriorly the lateral sinus crossing the exposed dura mater.

FIG. 2.



Second stage of operation. The dura mater has been incised, a spatula introduced, the cerebellum pressed backwards and the auditory nerve exposed.

it only requires patience successfully to divide the auditory nerve and to leave the facial intact. We performed the operation many times and verified the result after the removal of the brain.

On Sept. 3rd the first operation was performed, it being then intended to complete the procedure at one sitting. The usual incision was made through the old scar and from the middle of this another incision was made backwards for about an inch, in order to provide for the exposure of the cerebellum. The steps above narrated were followed out except in so far as the process was shortened by the previous removal of bone. The lateral sinus gave considerable trouble; it was large, tensely distended, and protruded in such a way as to suggest that the normal flow through it was obstructed. In removing bone at the lower part of the wound and over the lateral sinus as it turned in towards the foramen lacerum posterius considerable bleeding occurred which necessitated plugging and the postponement of the operation until the bleeding ceased. The wound was therefore closed and the patient was put back to bed. The operation caused at first a considerable amount of shock but it passed off by the next morning; vomiting was also troublesome and the patient complained of pain in the region of the left ear and eye. The pulse was 100 and the temperature was 99·2° F. During the next few days her condition improved but she still suffered from headache. The noises in the ear caused her great distress.

On Sept. 10th, the pulse being 92 and the temperature 98°, the wound was reopened and the operation was proceeded with. The lateral sinus, although now filled with clot, was still very prominent. The anterior border of the exposed part of the dura mater was divided, the incision being somewhat curved with the convexity forwards. Its length was about one inch. A large amount of cerebro-spinal fluid at once flowed out. A flat bent retractor was then introduced and an attempt was made to expose the nerve; it was found, however, that sufficient room could not be gained owing to the resistance offered by the lateral sinus; this was therefore divided between ligatures. The cerebellum was next slowly pressed backwards, but a good view of the parts could not be obtained owing to the continual flow of cerebro-spinal fluid. In addition to this considerable trouble was given by bleeding which proceeded from the surface of the cerebellum. After much difficulty a view of the nerve was obtained. By means of a blunt hook the auditory nerve was pushed aside and the facial nerve was exposed. The hook was then turned through a right angle and passed behind the auditory nerve which by traction was torn across. At this moment bleeding again obscured the view but when this had ceased the divided end of the auditory nerve could be seen lying in the internal auditory meatus, while the facial, distinguishable by its small size, was seen to enter the meatus intact. As far as could be judged the operation had been successful. The wound was closed, a small gauze drain being inserted at the lower angle.

On Sept. 11th there was no facial paralysis, the tinnitus had greatly subsided but was still obvious to the patient, the temperature was normal, and the pulse was 80. The patient complained of considerable giddiness when she attempted to raise her head and also of headache. The dressings were continually soaked with cerebro-spinal fluid. On the 12th the flaps were found bulged by blood clot, some of which was let out. On the 14th the cerebro-spinal fluid was still being discharged in considerable quantities. The stitches were found to have given way and a considerable amount of blood clot to have been extruded. There was some hernia cerebelli. There was no attempt at healing in the wound. The temperature was 98·8° and the pulse was 84. Diplopia was present to a very slight degree. The headache still continued but was less severe. The patient had not rallied properly from the operation and although she complained of giddiness her state did not admit of any attempt being made to learn the exact nature of this beyond the fact that it did not trouble her if she kept quiet. There was occasional vomiting. On the 24th the general condition remained the same. The diplopia had cleared up. The flaps no longer bulged and the wound was quite clean but showed no signs of healing; the discharge of cerebro-spinal fluid continued. The headache was at times severe and required morphine. The patient no longer complained of tinnitus. The ocular fundi were normal. From this time until the day of her death her condition varied very little. She gradually lost strength and became more and more apathetic, so that no observations of value could be made. The wound never showed any reaction or made any progress in healing. The cerebro-spinal fluid continued to be discharged in large quantities. The pulse varied between 100 and 120 and the temperature between 99·4° and 97°, except on Sept. 28th when it rose to 101°. Death occurred on Oct. 1st, 21 days after the division of the nerve.

Necropsy.—At the post-mortem examination it was found that there was no meningitis at any point. The cerebrum was healthy throughout. The right cerebellar hemisphere was also normal in appearance and consistence. The left cerebellar hemisphere was somewhat soft but showed no loss of substance. The cortex was blood-stained and the vessels were full of blood. The cochlea and semicircular canals on the left side presented a perfectly normal appearance. The facial nerve was intact. The auditory nerve had been divided, with the exception of a strand as thick as a fine piece of cotton which lay next the facial nerve. The other organs were healthy except for old caseous foci at the apex of the left lung.

Report by Dr. FARQUHAR BUZZARD.—"The material submitted to me for examination included the lower half of the pons Varolii and the entire medulla oblongata; unfortunately the cerebellum had been removed from the former so that the ultimate destination of certain fibres of the vestibular nerve could not be ascertained. The whole piece was divided transversely into a number of thin blocks which were stained by the Busch modification of the Marchi method, imbedded in celloidin, and cut. The sections obtained were mounted serially and examined under the microscope with the following results briefly summarised.

About two-thirds of the fibres of the cochlear nerve constituting its entering root were degenerated, the non-degenerate fibres being distributed in its lateral and posterior part. The majority of the degenerate fibres terminated in the ventral cochlear nucleus; a very few could be traced as far as the dorsal cochlear nucleus and a considerable number turned sharply inwards and cerebrumwards to the region of the superior olive and, *viâ* the corpus trapezoides, to the opposite side of the pons.

The whole of the entering root of the vestibular nerve was degenerated. The large majority of the fibres could be traced into the principal nucleus (nucleus nervi vestibuli medialis) or into the descending root where they could be followed in diminishing numbers as far down as a level corresponding to the middle of the hypoglossal nucleus. A smaller number of fibres broke up in the neighbourhood of Deiters's nucleus (nucleus nervi vestibuli lateralis) and a few turned directly into the corpus restiforme soon after their entry into the substance of the pons. In the absence of the lateral wall of the fourth ventricle it was impossible to say whether any fibres passed direct to Bechterew's nucleus (nucleus nervi vestibuli superioris) or into other parts of the cerebellum. In addition to the degeneration resulting from the section of the eighth nerve much recent degeneration was seen in the descending spinal root of the fifth nerve of the same side throughout its length in the pons and medulla, suggesting that the afferent portion of that nerve had been damaged in its extra-medullary course.

Finally, there was noticed a hæmorrhagic softening of the tissue immediately surrounding a small vessel which entered the pons on the medial side of the vestibular nerve and which pursued a course inwards, dorsum-wards and cerebrum-wards, without, however, penetrating as far as the corpus trapezoides. The degeneration resulting from this vascular lesion was confined principally to certain transverse fibres of the pons going to the middle cerebellar peduncle. I have seen similar vascular lesions as the result of the operation for the division of posterior roots and attribute them to accidental traction upon accompanying or neighbouring vessels."

This case shows the possibility of division of the auditory nerve within the skull without injury to the facial nerve. The chief difficulty to be feared is bleeding from the surface of the cerebellum which was encountered in this case and to which must be attributed the failure to divide completely the nerve. At the operation no remaining strand could be seen, owing, we think, to the strand adhering to the facial nerve and thus escaping recognition. The blunt hook must have penetrated the nerve in such a way as to leave this small portion behind and in attempting to sponge away the blood after the hook had been pulled out the small strand was in all probability pushed up against the facial nerve and remained in contact with it. The cause of death was not

ascertained with any certainty. Probably the wretched condition of the patient before the operation was a contributing factor, as it left no reserve force properly to combat the shock of the operation and to produce a healing reaction in the wound and so to prevent the continual loss of the cerebro-spinal fluid.

The case was a failure both clinically and scientifically. There was no doubt that the tinnitus was present, though diminished, for several days after the operation and it is doubtful if it really ever subsided. Taking into consideration the degeneration described by Dr. Buzzard the continuance of the tinnitus must be attributed to one of two causes: (1) that the noises are central in origin; or (2) that the causes of the tinnitus originate in the cochlea and the impulses by which they become apparent are conveyed to the brain by the cochlear nerve (the vestibular nerve was completely degenerated).

A NEW METHOD OF DEMONSTRATING THE LARYNGEAL IMAGE AND INTRA-LARYNGEAL OPERATIONS.

BY EUGENE S. YONGE, M.D. EDIN.,
HONORARY ASSISTANT PHYSICIAN TO THE MANCHESTER HOSPITAL FOR CONSUMPTION AND DISEASES OF THE THROAT.

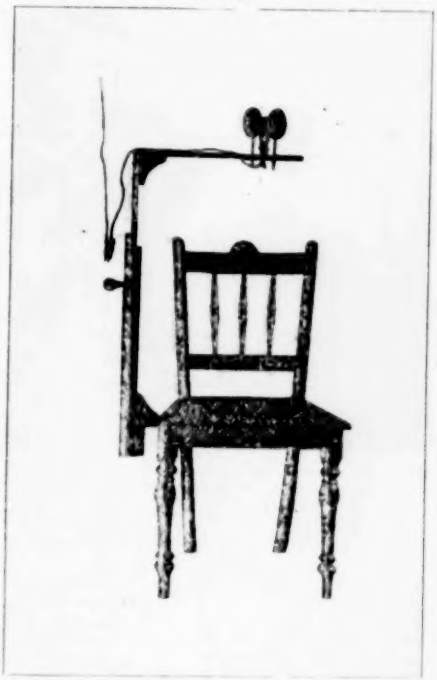
THE practical study of laryngology appears to have been entered upon—at any rate in this country—by a comparatively small number of the profession outside those actually engaged with the subject as a specialty. The acquisition of the art of laryngoscopy has not been looked upon by the student as necessary for his academic salvation and it has therefore had a tendency to be regarded in the light of a supererogatory work. This circumstance, together with the appreciable amount of time and practical experience required to gain dexterity in laryngeal and intralaryngeal work, and the relatively infrequent occurrence of such cases in general practice, may have been responsible to some extent for the limitation of interest. But there is also the fact that the clinical demonstration of laryngeal cases, whether in the class room or at general medical meetings, has very commonly proved unsatisfactory and cases have failed to arouse the interest they deserved on account of the defective nature of the means which were available for showing diseased conditions of the region in question. It has been, and is, of course, possible for a laryngoscopist to demonstrate the laryngeal image, as it were, "over his shoulder." There is practically room for the head of one observer to occupy the place of vantage and to obtain a fairly satisfactory view. But apart from such disadvantages as the Laocoon-like contortions often necessary on the part of the laryngoscopist and the more or less confused crowding, due to want of space, on the part of the observers, the method is slow, limited of application, and uncertain, and the proper demonstration of operations or manipulations within the larynx is quite out of the question. Recently Professor Meyer of Berlin has been instrumental in changing all this and he has introduced a method which will, I believe, put the subject of laryngoscopy on a new footing and will render some service to the teaching of laryngology. I have had the opportunity of making a number of experiments with an apparatus constructed (with some modifications) from the model kindly shown me at Berlin by Professor Meyer and the results of these observations have been as follows. It was found possible to show an image of the larynx, practically identical in every respect with that seen by the person examining the larynx, to as many as six observers at one time, the latter being situated at convenient distances from the patient, from the examiner, and from each other (Fig. 1). Also, intralaryngeal operations could be as clearly seen by the observers as by the examiner. The images were conveyed to the observers' vision by means of reflections on two circular plane mirrors, placed one on either side of the illuminating apparatus (Figs. 2 and 3). An observer situated at a distance of six or eight feet from the mirrors obtained as good an impression of the laryngeal image as a person situated close to the reflecting surfaces.

In the case of clinical meetings it has been found practicable to demonstrate laryngeal cases to about 130 observers in 20 minutes—two, three, or more observers examining at one time. In the experiments noted above most of the anatomical regions of the larynx could be demonstrated to the six (placed) observers by means of a laryngeal probe which was introduced, thus proving a method of teaching the topography of the larynx which had previously been possible only on specimens removed from the body. From a mechanical point of view the original apparatus

FIG. 1.

Six persons watching an intralaryngeal manipulation. The mirrors into which they are looking, and also the patient, are hidden, owing to the position of the examiner in the plate.

FIG 2.



Professor Meyer's original apparatus. The chair is for the patient. On the horizontal bar are the lamp with its electrical connexion and the two demonstrating mirrors placed at the best angle to catch the laryngeal image. The backs of the mirrors only are seen; the observers stand at the sides. (Vide Fig. 1.)

(Fig. 2) can be briefly described as follows. There is, in the first place, a strong straight-backed wooden chair and on the right side of the seat is affixed a vertical arm. This arm is hollowed out to receive a smaller vertical arm and to this, in its turn, is attached at right angles a flat horizontal piece of wood. On that part of the horizontal piece which is nearly opposite the middle of the back of the chair (more correctly, facing the patient's mouth when he is seated in position) the laryngoscopic portion of the apparatus is placed (Fig. 2). The last-named part of the machine consists of a small electric lamp and two circular mirrors, each of the latter being three inches in diameter. Clear, unimpeded images of the larynx, or reproductions of any intralaryngeal operations which may be in progress, are reflected upon these mirrors. The examiner or operator looks through an opening in the sleeve of the electric lamp and thus gets a view of the larynx, as in the ordinary manner, except that he is only able to use one eye at a time. The inconvenience caused by this is almost negligible. The small modifications

FIG. 3.

Showing the method of examination. The light is thrown into the patient's mouth and the laryngeal image is projected from the laryngoscopic mirror on to two mirrors, one of which is seen close to the examiner's right eye. The faint impression of the larynx, which can be seen in the plate, is clear and well illuminated in the actual apparatus.

which I have thought useful are the construction of a detachable apparatus in which the essential laryngoscopic portion can be affixed to any laryngeal lamp-holder or upright, thus rendering the machine more portable and convenient and also considerably reducing its cost. Also, I am producing an apparatus by which four laryngeal cases can be shown (if necessary in rapid succession) to a number of observers simultaneously. The apparatus has been shown to the Laryngological Society of London and at other meetings and it is, I understand, being adopted at a number of teaching hospitals. Finally, the method is not proposed to supplant, for the student, the personal examination of the larynx but rather to stimulate his interest in the subject and to supplement his practical studies. The apparatus is made (in England) by Messrs. Armstrong and Brother, opticians, Deansgate, Manchester.

Manchester.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A NOTE ON FIBRO-MYOMA OF THE BULBAR CONJUNCTIVA.

BY KENNETH SCOTT, M.D., F.R.C.S. EDIN.,

CONSULTING OPHTHALMIC SURGEON, ST. MARY'S CHILDREN'S HOSPITAL, E.; FORMERLY PROFESSOR OF OPHTHALMOLOGY AND OPHTHALMIC SURGEON, KASR-EL-AINI HOSPITAL, CAIRO, EGYPT.

THE occurrence of a fibro-myoma in this position is unusual and receives only slight passing mention in ophthalmic writings. This instance is perhaps worthy of note as the situation of the tumour involved the possibility of dangerous extension which would not only have interfered with vision but might have completely destroyed the utility of the eye, besides the ulterior risk of serious consequences connected with the fact of its very rapid and active recurrence. The growth unfortunately occurred in a medical colleague and he, probably quite correctly, associates the incidence of the tumour with an accident which happened to him while engaged in his professional duties. When he was breaking a tube of vaccine at a patient's house on August 12th of last year, a small piece of the glass flew up, struck against his right eye, and remained lodged there; it gave rise to much pain at the time and was only removed with difficulty and after considerable effort on the part of those in the house. He gave the incident no further thought until a month later, in September, when he noticed a small point of redness at the site of the recent injury in his right eye, on the sclera close to the inner edge of the cornea. This slowly increased in size and at the same time became thickened, but was not associated with pain, discomfort, or any other inflammatory symptom. There was never any question about the possibility of this being a modified form of vaccine pustule, as the lapse of time did not correspond, nor did it bear the least resemblance to such an inflammation.

The patient at once sought medical advice and used the various applications prescribed, but without producing any alleviation. The local condition soon became much aggravated, the growth increasing both in area and thickness very rapidly, so that on Oct. 12th, two months after receiving the injury, he obtained the able services of one of his friends, a surgeon, to remove the growth; this was skilfully performed with scissors and the small tumour was removed from the surface of the eyeball as completely as possible. When I had occasion to see the eye some days after this operation the wound had healed and there was only a slight redness present, limited to a portion of the sclera on the inner aspect of the globe opposite the palpebral fissure; there was no trace apparent of any extraneous morbid tissue remaining on the eye. The patient felt no local sense of irritation, there was no lacrymation, and only some tenderness of the eye on exposure to wind or to a draught of cold air.

On Nov. 28th, 47 days after the previous operation, I was consulted on account of the sudden reappearance of the growth and found that on the same site—viz., over the inner aspect of the sclera, close to the margin of the cornea and opposite the palpebral fissure, there was a very considerable accumulation of new solid tissue, upon, and closely connected with, the subjacent scleral layer; this surrounded, but avoided covering, the area occupied by the former tumour, thus giving the appearance of there being a wide depression in its centre. The growth measured four millimetres horizontally, three millimetres in vertical diameter, and was approximately one millimetre in thickness; it was of a brownish red colour and was semi-transparent; its surface was polished and its margin was distinct and clearly defined; there was entire absence of any sign of inflammation accompanying it. Each day it showed markedly rapid increase both in size and thickness, so that on Nov. 30th I was compelled to remove it entirely.

My first incision was made in the normal conjunctiva surrounding the tumour and then by very careful and complete

dissection I excised from this marked-out area all the tissue lying superficially to the sclera. The surface thus exposed on the globe of the eye was a comparatively large one, but it healed gradually and satisfactorily and became completely covered with new epithelium without the formation of any cicatricial contraction. On Dec. 16th, 16 days later, the eye was quiet and the bandage and dressings were left off. Three days afterwards, when I was examining the eyes minutely by oblique illumination, I for the first time saw on the margin of the upper eyelid of the right eye (the eye which had been affected) a delicate fine eyelash which was inverted and rubbed against the surface of the globe, almost exactly at the point formerly occupied by the tumour. The eyelash was epilated and has not made any further appearance. Whether this had existed previously and taken part in the causation of the tumour or in its recurrence are questions which must remain undecided. The offending eyelash was an exceedingly fine one and could only be seen when examined through a lens of high magnifying power.

A careful histological examination of the recurrent growth was made after its removal and the following report was obtained: "After fixation in alcohol sections were made, placed in carbolic thionin, and stained. Result of examination.—Fibro-myoma. The cells are elongated, with rod-shaped rectangular nuclei, filling all the stroma which is fine, ribbon-like, and very crowded. At the periphery there are some vessels containing blood and some groups of microbes (probably ulceration)."

I understand that a similar result was yielded by microscopical examination of the tumour which was originally removed. Since the removal of the bandage and dressings over the eye no application or local medication has been employed, and the eye presents no indication, except on most minute and careful observation, of its recent condition and there is every reason to believe that permanent relief has now been obtained.

Manchester-square, W.

NOTE ON A CASE OF SO-CALLED "SPONTANEOUS FRACTURE" OF THE FEMUR FROM SECONDARY MALIGNANT DISEASE WITH SUBSEQUENT FIRM BONY UNION.

BY T. MORRELL THOMAS, M.D., M.S. LOND., F.R.C.S. ENG.,
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AND
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RESIDENT MEDICAL OFFICER, NEWPORT AND MONMOUTHSHIRE HOSPITAL.

WE record the following case on account of its extreme rarity. According to Mr. S. Boyd, in his article on fractures in Treves's "System of Surgery," there are only some four or five on record. The patient, a married woman, aged 47 years, had her left breast removed for scirrhus 14 months prior to the date of fracture. The scirrhus was one of rapid growth, was fairly advanced, fixed to the pectoralis major, and there was palpable gland implication. She had had increasing weakness of both legs (? due to advancing cachexia) for six months prior to fracture and for the same length of time had "rheumatic" pains in both thighs. As these pains were more definitely localised over the future site of fracture it seems possible that they were due to implication of nerve fibrils in the growth. On Dec. 6th, 1902, while the patient was in the act of stooping to pick something up off the floor the left thigh suddenly snapped. She was admitted to the Newport and Monmouthshire Hospital two days after the accident and remained there till she died. On admission she was found to have sustained a fracture of the left femur at the junction of the upper and middle thirds. The limb was put up on a McIntyre splint. Thinking an ununited fracture was inevitable no extension was applied to the limb; we thought it would give her needless pain, so the limb was merely allowed to rest on the splint, being frequently taken down to guard against splint sores. Not much attention was paid to the condition at the site of fracture for the reason mentioned above. On Jan. 26th, 1903, however, seven weeks after the accident, an examination of the part showed that union had taken place. There was at this time a recurrence at the site of the removal of the breast as well as a mass in the liver. The patient got steadily weaker and died from secondary malignant disease on Feb. 15th.

Necropsy.—The site of fracture was cut down on and the upper half or so of the femur was removed *en bloc*. Such firm union of the fragments was found that they could not be torn apart even on the exertion of considerable manual force. A mass of cancerous growth was found wrapping the upper third of the femur loosely round and eroding it at the site of fracture—i.e., the upper end of the lower fragment and lower end of the upper—but the rest of the femur was uneroded. The conjoined mass of callus and malignant tissue cut like a scirrhus but with a gritty sensation at parts. It apparently extended from a chain of malignant glands which passed down from behind Poupart's ligament and seemed to have acquired an attachment to the periosteum. There was distinct overlapping of the fragments and to this union seems to have been due, for by this means unimplicated portions of periosteum were brought into apposition, not the diseased extremities of the fragments. A paring was taken from the mass in the neighbourhood of the end of one of the fragments and sent to the Clinical Research Association for microscopical examination. The report was as follows: "The tissues consist of periosteum and young bone with some adjacent fat and cellular tissue. They are all thickly infiltrated with narrow lines of scirrhus carcinoma." Occurring as this case did subsequently to removal of a rapidly growing scirrhus, the result being firm union of the fragments and the condition of overlapping suggesting a possible explanation of departure from the sequence of events which is usual in such cases, we have thought it right that the case should be published.

NOTE ON A CASE OF TRANSPOSITION OF THE VISCERA.

BY EDWARD LIDDON, M.D. EDIN.,
CONSULTING PHYSICIAN TO THE TAUNTON AND SOMERSET HOSPITAL.

THE interesting case reported by Dr. William Hartland in THE LANCET of April 9th, p. 1017, reminds me of a very similar instance that came under my notice some years since when holding the appointment of honorary physician to the Taunton and Somerset Hospital.

A young man, aged 19 years, was admitted with pneumonia of the left base, and on examination it was discovered that all the viscera were transposed, the heart and spleen to the right, whilst the liver lay beneath the left ribs. He was a source of much interest to myself and to all my colleagues whilst he remained in the hospital. He made a good recovery from his illness and went into service near Brighton and for some years continued in good health. He had never been robust and always carried a "high colour," but until his attack of pneumonia he had suffered from no serious illness. His father died from some form of heart trouble; his brother, who had been a groom in my stable, was healthy and possessed no malformation. It was from him that I heard of my hospital patient's well-doing for some years after he left this neighbourhood.

Taunton.

CENTENARY OF THE RUSSIAN MEDICAL COUNCIL.—On April 22nd the Russian Medical Council completed its 100th year dating from its first session. It was founded on Dec. 31st, 1803, by order of the Minister of the Interior, Count Kotchubye, and was formally opened on April 9th, 1804. At the first gathering of the Council the Sovereign order for its constitution was read and a committee of five members was chosen to draw up the rules, duties, and prerogatives of the Council. It is proposed to celebrate its first centenary in a special manner on April 9th, 1905.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM.—The committee of management announces that the annual meeting will be held at the New Hospital, 4, Maida vale (near the end of St. John's Wood-road), at 4.30 P.M., on Thursday, May 5th, at which hour Mr. Charles Drummond, the treasurer, will take the chair. The annual report and financial statement for the year 1903 will be presented. After the meeting the New Hospital, now in full work, will be open for the inspection of those who attend this meeting.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

CENTRAL LONDON OPHTHALMIC HOSPITAL.

OPTIC NEURITIS, OCULAR PARALYSIS, AND ABSENCE OF THE KNEE JERKS IN A CASE OF CHLOROSIS.

(Under the care of Mr. ERNEST CLARKE and Dr. C. O. HAWTHORNE.)

THE essential facts of the case here recorded can be stated in a few words. The patient, an unmarried woman, aged 22 years, was first seen by Mr. Clarke and Dr. Hawthorne at the Central London Ophthalmic Hospital on Oct. 27th, 1903. Her appearance and recent history were such as are common in cases of chlorosis and she was undoubtedly the subject of that disease in a moderately severe degree. In addition, however, to breathlessness and other familiar symptoms she complained of double vision and some failure of sight. These were of recent development (seven days) and their appearance had been preceded by severe headaches extending over a period of from three to four weeks. For the diplopia there was a very manifest cause in the shape of a paralysis of the left external rectus muscle. Similarly the defective vision (right $\frac{6}{9}$ left $\frac{6}{12}$) was associated with appreciable changes in each fundus oculi. These included considerable swelling (right + 4 D., left + 5 D.) of the optic discs with a few attendant hæmorrhages, a distended and tortuous condition of the veins and some evidences of retinitis, the last mentioned being specially marked in the right fundus. For the rest physical examination was entirely negative save in one respect—namely, complete absence of the knee-jerks. The personal history included an attack of scarlet fever four years ago but no other serious illness; the menses did not appear until the patient was 19 years old and had only been repeated in the form of a scanty discharge on three or four occasions. There was no reason whatever to suspect the presence of syphilis. The completion of the clinical record may be summarised in the statement that under rest in bed and full doses of iron the patient made a satisfactory recovery, though even as late as Feb. 17th, 1904 when she left the hospital, the right macular region showed some evidences of retinal disturbance and the vision with this eye was only $\frac{6}{9}$; the left fundus was normal to the ophthalmoscope and the vision $\frac{6}{6}$, there being in each eye less than 0·5 dioptre of hypermetropia. The first evidence of the success of the treatment was the relief of the headache. This ceased to be a source of complaint about seven days after admission. Some three weeks later the left external rectus muscle appeared entirely to have regained its power. The subsidence of the swelling of the optic discs was a very gradual process and was not complete until the end of January. Even then the knee-jerks remained absent and it was only in the first week of February, when the general condition of the patient had reached a high level, that their restoration was noted.

Remarks by Mr. CLARKE *and* Dr. HAWTHORNE.—The problem the foregoing clinical facts offer for solution is this: What is the probable relationship between the state of chlorosis on the one hand and a neuro-retinitis, an ocular paralysis, and a loss of the knee-jerks on the other? Regarding the absence of the knee-jerks it may be well to state that every care was taken to make the observation an exact and accurate one. The tests were applied with all the recognised precautions, they were repeated on many occasions during a period of three months, and the result was several times confirmed by independent observers. Whatever be the explanation the fact must be accepted as entirely beyond question.

Now of the three conditions named above, one of them, optic neuritis or neuro-retinitis, has for some time been admitted as a complication in a certain small proportion of the patients who come under observation as the subjects of chlorosis. The fact has attracted the attention of several observers but no one has succeeded in advancing an explanation generally accepted as adequate. In 1902 one of the present writers[1] recorded a case in which chlorosis was associated not only with double optic neuritis but also with an ocular paralysis (right external rectus), and some few other examples of a similar combination have been reported. These facts, with other considerations duly set forth at the time, suggested, it was urged, that a probable explanation of the optic neuritis occasionally occurring in chlorosis may be found in a thrombosis of the intracranial veins or sinuses.

The argument, so far as the individual case was concerned, was presented on the following lines: the simultaneous occurrence of the optic neuritis and the sixth nerve paralysis suggests a common causation; the nature of the two events makes it difficult to imagine any single cause capable of producing them other than an intracranial lesion; an intracranial thrombosis may certainly produce them; intracranial thrombosis is a recognised possibility in chlorosis; the patient is the subject of chlorosis; therefore it may be concluded with a considerable measure of confidence that an intracranial thrombosis is the cause both of the optic neuritis and the sixth nerve paralysis. And this position, it was suggested, supported the view that when optic neuritis occurs as the sole unusual event in a case of chlorosis intracranial thrombosis may be accepted as the probable cause. The case now recorded may be held to strengthen this theory so far at least as it is a further illustration of the possibility that some event or events included among the occasional developments of chlorosis may produce both a double optic neuritis and an ocular paralysis. But the facts of the case go beyond this. They include a prolonged absence followed by a complete restoration of the knee-jerks. Hence it becomes necessary to consider whether this further fact suggests or compels any modification of the view that intracranial thrombosis is the cause of the optic neuritis seen at times in chlorotic women. Of course, there is no actual proof that the three events—optic neuritis, sixth nerve paralysis, and absence of the knee-jerks—are results of one and the same cause. But they offer themselves as phenomena occurring at or about the same date, each is a quite unusual event in the course of chlorosis, and all of them signify some disturbance in the nervous apparatus. Hence, unless good reason to the contrary can be shown it seems necessary to regard them, at least in all probability, as events of an identical order and dependent upon a common cause. Now it may at once be allowed that it is very difficult to believe that an intracranial thrombosis producing no more serious objective disturbance than optic neuritis and a sixth nerve paralysis can be held responsible for absence of the knee-jerks. Tumours of certain parts of the brain and also basal meningitis may, it is true, be quoted as intracranial lesions which have been known to cause such a result, but it would need some courage to advance a limited intracranial thrombosis as equal to this effect. It must, therefore, be admitted that absence of the knee-jerks in a case of chlorosis attended with double optic neuritis and an ocular paralysis does not add force to the suggestion that the neuritis and the paralysis are due to an intracranial thrombosis. If all the three conditions are to be referred to a common cause little can be said in support of the hypothesis that intracranial thrombosis is that cause.

Another reading of the development of optic neuritis in chlorosis is that it is a consequence of the abnormal state of the blood and the question may therefore be asked whether the facts of the present case can be better brought into harmony with this theory rather than with the doctrine of intracranial thrombosis. It is certain that an ocular paralysis and absence of the knee-jerks observed in conditions known to produce degenerative nerve changes as the result of an altered quality of the blood—say, for example, diabetes or diphtheria—would be regarded without hesitation as consequences of a common cause—namely, peripheral neuritis. Equally there can be no difficulty in admitting that neuro retinitis may be produced by a changed character of the blood supply. Examples of this are familiar in chronic interstitial nephritis, secondary syphilis, and other diseases. Again, such experiences as the association of optic neuritis with herpes and with lead paralysis show that one and the same poison may attack both the optic nerve and other peripheral nerves of less specialised function.

[1] Hawthorne: Brit. Med. Jour., Feb. 8th, 1902.

The occasional development of an ocular paralysis with herpes of the face and the occurrence of retinitis, ocular paralysis, and loss of the knee-jerks in diabetes may be used as further illustrations of the possible manifestation of changes in the peripheral nervous apparatus capable of being produced by an altered quality of the blood. Such facts may all be utilised to strengthen the argument that in the present case the neuro-retinitis, the ocular paralysis, and the loss of the knee-jerks are all expressions of effects produced on peripheral nerve structures by the abnormal blood quality which exists in chlorosis. And the joint association of these three events in one and the same case may reasonably be urged in support of the view that it is in an abnormal state of the blood and not in intracranial thrombosis than an explanation of the optic neuritis of chlorosis is to be found.

In brief, it may be recognised that the facts of the case now under discussion, at least at first sight, adapt themselves to the theory just stated more readily than to the hypothesis of intracranial thrombosis. Is it therefore necessary to abandon the latter event as the probable cause of optic neuritis in chlorosis? Before doing so it may be well to consider what may be said in arrest of judgment. And at the outset it is proper to remark that the facts now presented are illustrated only by a single case. Neither loss of the knee-jerks nor any other symptom that may be regarded as a manifestation of peripheral neuritis is included among the phenomena of chlorosis, unless it be that various neuralgic pains may be so interpreted. Now, considering how sensitive is the nervous arc upon the integrity of which the knee-jerk depends to the action of various poisons which have a prejudicial influence on the peripheral nervous apparatus, it is indeed remarkable, if chlorosis is capable of exercising such an influence, that evidences of peripheral nerve changes are not, at least occasionally, noted among the facts of that disease and this more especially when it is remembered that examples of the disease are constant and universal. Upon such a view it would have been expected that peripheral nerve disturbances would have been common and that loss of the knee-jerks would have been a frequent index of their existence. On the other hand, absence of the knee-jerks, though probably always pathological, is occasionally noted in circumstances which fail to supply any explanation of the condition. Caution is therefore necessary before adopting the assumption that such absence in the present instance is necessarily the expression of peripheral nerve changes due to an abnormal quality of the blood. The suggestion of a satisfactory alternative is not easy, but the long array of negative observations is in the circumstances a warning against a too ready acceptance of a somewhat inviting conclusion.

Again, it must be remembered that there exists a considerable body of direct evidence that optic neuritis with various signs of cerebral disturbance occurring in chlorotic patients is undoubtedly associated with intracranial thrombosis. This is furnished in part by post-mortem examinations and in part by cases in which together with optic neuritis there was thrombus formation in the veins of the lower limbs or elsewhere. Detailed reference to these will be found in the paper already quoted and with these other arguments directed towards the same end. It would appear doubtful policy to abandon the significance of all this under the temptation offered by one fact in the history of a single case, and that fact perhaps not quite capable of an unambiguous interpretation.

Further it may be fairly remarked that the ophthalmoscopic aspects of the case offer a strong suggestion of the existence of some gross intracranial lesion. Such a considerable swelling of the optic disc as will justify the application of the term "choked disc" is not a condition commonly seen among the fundus changes produced by an altered quality of the blood. On the other hand this fact is a familiar note of the presence of an intracranial tumour and with it there may exist, from the same cause, evidences of widespread retinal disturbance. The point, it is true, is one of degree and not of kind, for blood changes and intracranial lesions alike must each be admitted as events competent to produce both swelling of the optic discs and generalised retinitis. Yet it is not without significance to observe that the ophthalmoscopic picture displayed in this case of chlorosis—and the statement is equally true of other similar cases—was one that conveyed to the mind a conviction of the presence of an intracranial lesion rather than an impression of inflammatory changes produced by an abnormal condition of the blood-supply. At the same time it is necessary to admit that the case has amongst its phenomena at least one which inclines the balance rather against than for the theory of intracranial thrombosis.

It may, of course, be said that on any view one case carries but little weight. But it is essential to deal with all the facts in an endeavour to frame a comprehensive theory. And facts of the order here presented would appear to be of such rare occurrence that no one observer has the opportunity to accumulate from his own experience a collection adequate to sustain an authoritative pronouncement. It is only by contributions from numerous sources that a body of material sufficient for this purpose can be secured. Hence the necessity for all observers to record their individual experiences. It is in recognition of this claim that we report the present case. Of all the problems associated with optic neuritis its occurrence in chlorosis is surely one of the most interesting, and as post-mortem evidences in such cases can rarely be available it is the more desirable to multiply so far as possible the number of exact clinical observations.

ROYAL DEVON AND EXETER HOSPITAL.

A CASE OF INTRACRANIAL HÆMATOMA.

(Under the care of Mr. J. DELPRATT HARRIS.)

FOR the notes of the case we are indebted to Dr. W. Gordon and Mr. Harris.

On August 17th, 1903, a labouring man, aged 62 years, was taken to the Royal Devon and Exeter Hospital with the following history. On June 21st he was knocked down and rendered insensible in a stone quarry by a stone falling on the top of his head. He was stunned for a short time and was able to walk home. For the first fortnight he only complained of bruises in different parts of his back and loss of sleep. This latter was the only nerve symptom which so far had manifested itself. He then began to complain of sciatic pains on the right side with partial loss of power in the right leg with exaggeration of the knee-jerk. At the end of two weeks this pain passed away and the power of the limb so far recovered that he was able to walk out. Loss of power on the left side now gradually set in until he arrived at his condition on admission. There had never been any signs of paralysis of the left side prior to this. There were no scalp wounds or other wounds, only bruises. There were no mental symptoms until a month after the accident, about the same time that the paralysis began to appear on the left side. The stone was said to be about seven pounds in weight, probably flat, falling from no great height. He himself fell but only his own height on loose quarry rubble. During the fortnight he was in complete possession of his faculties he repeatedly complained of pain and bruises all over his body, principally on the back of his neck but also in the lumbar region, the left arm, and the wrist. Shortly after the accident his eyelids showed much ecchymosis but neither his nose nor ears bled at all. On admission his condition was as follows. He was more or less imbecile, nervous and suspicious, and could give no proper account of himself; he was talkative and restless. No signs of injury were seen in the scalp or the face. There were no tender points. The pupils were unequal, dilated, and moved slowly to light reflex. The tongue was evenly protruded. The thorax, the lungs, and the heart were all normal. The abdomen was somewhat distended and all the abdominal reflexes were present. The left arm was wasted, with contracture to an angle of about 70°; it could be nearly straightened but with much pain. The bicipital reflex was marked. The elbow and the wrist reflex were present. The fingers were strongly contracted into the palm of the hand. Both legs were somewhat wasted, the right especially, the skin on this side being atrophied and the heel somewhat red. Both limbs were very rigid, the left the more so. The left was in a condition of spastic rigidity with adduction and the knee jerk on this side was excessive. Ankle clonus was not present. There was incontinence of urine. The pulse was slow and regular; the temperature fluctuated between 97° and 98° F. Great pains were taken to collect reliable information as to the accident and its immediate result. The case was carefully watched also, the immediate point of interest being whether any gross lesion existed in the spinal canal or whether intracranial mischief alone could

account for all the symptoms. Efforts were made to observe the optic discs, but owing to the ceaseless restlessness and talkativeness fleeting glimpses were all that could be obtained. The apparent outer margin of the left disc seemed blurred but the disc otherwise was normal, whilst the right disc did not betray any marked abnormality.

On Sept. 5th the patient was trephined over the right motor area. The scalp bled more freely than usual; the bone was unusually soft. The dura mater was found to be yellow and opaque. Its pulsation was diminished. On incising it the arachnoid bulged up, appearing dark and somewhat greenish. On incising this deep claret-coloured clot protruded, evidently under pressure, and on prolonging the arachnoid incision a quantity of altered blood clot and serum poured out per saltum. Certainly not less than four ounces must have thus come away, probably more. A drainage tube was inserted and the wound was closed, the tube passing through the flap. The cavity of the hæmatoma as gauged with a probe was not smaller than an average hen's egg; it was of irregular shape, with its long axis antero-posterior. This, which was more or less centrally over the Rolandic fissure, therefore involved all the upper motor centres and considerably trenched on the anterior frontal lobes. Prolongation of the cyst extended immediately downwards towards the base.

The immediate result of the operation was most definite, for the left arm and left leg became quite flaccid on the following day, the 6th. The pupils were dilated but contractile to a lighted match. There was no improvement in intellect. On the 7th the patient could move the fingers of the left hand slightly and raise the left leg from the bed. He asked for the urinal on this day. On the 11th it was noted that rigidity of the arm and leg had returned. The pupils reacted still but he passed urine in bed again. On the 12th, finding his improvement stationary and some of the symptoms less satisfactory, it was decided to reopen the wound and to see whether any fresh hæmorrhage had occurred, and failing that to scoop out the layers of fibrin which might be the cause of the continued compression, if such could be done without setting up fresh hæmorrhage. The wound being reopened and the clots around the opening in the dura mater removed, the bone was extensively "nibbled" away, exposing a surface of dura mater not less than two inches by two inches. The dura mater was then quite freely opened and the arachnoid also, the clots were turned out, mostly by the finger, aided by a tepid douche of sterilised water. The clots turned out were about from one and a half to two ounces in bulk. The brain was collapsed, opaque, whitish grey in colour, and it was noticed that it did not expand or pulsate; an exploring trocar was therefore introduced about half an inch to search the brain for abscess or hæmatoma, but none was found. The dura mater was carefully stitched. Iodoform gauze was lightly introduced to arrest any capillary hæmorrhage in the walls of the cyst and the wound was closed.

On Sept. 17th, the fifth day after the second operation, the notes state that up to that day the spastic condition of the left arm and leg had been lessening and the over-sensitive reflexes were almost abolished. The patient was very talkative (nonsense) and passed urine and fæces in bed. The iodoform drain was shortened on alternate days and was draining well. He had taken his food well—fluids and milk pudding. Choroiditis was clearly seen in the right fundus; the left disc was reddish and blurred on the apparent outer side, but was pale and grey on the inner. On the evening of the 16th he had an epileptiform attack lasting three minutes affecting the right side of the face markedly, clonic spasm in both arms and both legs, the body being turned towards the left. Coma came on and recovery soon followed. Up to this date his mental condition was very unsatisfactory, violent delirium requiring restraint, with great talkativeness, often of a quaint sort with delusions, being the rule. About five hours after this "fit" his mental condition improved and he asked for the bedpan and also the urinal. After this he moved his left leg and arm voluntarily and by the 19th it was noted that whereas he could be restrained by having the right side only tied down it now became necessary to tie down both arms as he was so very restless. On the 24th the paralysis was completely gone. His mental condition had improved on the whole but he was still subject to fits of excitement requiring restraint. They were getting less, however, and a short conversation was now maintained correctly, but if prolonged his attention wandered and he talked nonsense. The pupils now reacted to light and his knee-jerks were normal. The wound was looked at and found to be healed with the exception of two small surface wounds. On Oct. 13th he was wonderfully better; the mind was much clearer; once or twice a day he talked nonsense for a few minutes. There was no defect of speech and he could see and hear well. He walked well with no limp or staggering. The effect of each operation on the temperature was marked. Prior to the operation it seldom touched normal as related before; after the first operation it touched normal daily although it might be 97° a portion of the day. On the day following the second operation it touched 101°, coming down to normal on the fourth day, going below normal on the fifth, and gradually ascending to normal during the third and fourth week where it remained, but having a tendency to subnormal temperature of a morning. On the 25th his mental condition was quite sound and he left the hospital on Nov. 19th absolutely well, though a little pulled down by all he had gone through.

In THE LANCET of August 29th, 1903, p. 597, there was reported an interesting and unusual case of intracranial hæmatoma. The above case occurred in my hospital practice at the time of the publication of the case alluded to. It would, I think, be instructive to compare the two cases. There are several points of interest in the case, both medical and surgical, and first the amount of credence to be placed on the history. In the end it became evident that the patient's history of the accident was, in the main, correct. The extreme slowness with which the symptoms came on is another feature and clearly marks the difference between compression of the brain from middle meningeal hæmorrhage and subarachnoid. Doubtless the excessive slowness with which the blood was poured out from the smaller vessel was the cause; yet that a fortnight should elapse before any serious symptoms occurred is certainly surprising. That the earliest symptoms should have been pain in the right leg was misleading and led some of us to suspect a second lesion in the cord and that possibly the bladder trouble was referable to it also. If this were the case it must have been hæmorrhagic in character for the patient repeatedly denied that he felt any difference in the two legs on his recovery. The extreme pain which he had in the back of his neck received careful consideration, but it was probably due to osteitis set up by the violent blow. That the arm was in a condition of contracture as well as the leg was an important guide and helped to place the lesion high up in the cerebro-spinal system. There was no history of facial paralysis and so the higher portion of the pons was excluded from any share of compression. It was felt that too much importance must not be laid on the mental symptoms as aids to localisation as communicated pressure may cause such symptoms. Nevertheless, taken in conjunction with his motor symptoms, it was felt that should the motor area be the seat of a clot or hæmatoma any extension forwards would be likely to embarrass the functions of the frontal lobe. These considerations and the fact that his then condition was pitiable in the extreme led one to trephine first with a view to examine the cord later by laminectomy if sufficient was not found by trephining the skull. That the first operation was not followed by permanent improvement was clearly due to the collapsed brain not having the power to expand and to press the cyst wall flat, for the latter was thick and hard from partially laminated clot. Nevertheless, the operation being done in two sittings much diminished the risk of fresh hæmorrhage refilling the cyst. A point of some further interest occurs in the rapidity with which the muscles of the arm and leg regained their normal tone and contracture ceased—less than 24 hours—as compared with the couple of months required for the mental symptoms finally to disappear. The beneficial effect of the epileptic attack must, I think, be referred to the expanding brain on regaining its normal blood-supply becoming "charged" for a nerve explosion and its regaining its normal blood-supply was the cause of the improvement rather than the fit. The notes stating that during the fit his body was rotated somewhat towards the left and the right side of the face was convulsed are important as showing that the muscles on the right side were stronger than those on the left, the brain being irritated by a central lesion which had injured the motor centres on the right side. It is interesting to observe that the epilepsy was not so complete on the right side of the brain. No torn portion of brain could be found and from which artery the hæmorrhage came it is not

possible to say. As an instance of the quaint humour of the patient's rambling talk I may relate that when he kept trying to get out of bed, being asked why, he said, "I got a job on Thursday. I must go to a funeral at 12 o'clock." Being told he had better remain, he said, "Well, but I must be there, they can't do it without me. Tell 'ee the truth, 'tis my own funeral and that's a job they tell me I can't get out of."

Remarks by Dr. GORDON.—The diagnosis in this case was one of some interest. The occurrence of a monoplegia on one side after the accident succeeded by a more alarming hemiplegia on the other side was curious, but in the chief difficulty lay the clue. The lesions were obviously not spinal in origin. They seemed certainly due to the same cause—viz., the blow from the stone. This had been inflicted fairly on the centre of the crown of the head, therefore over both leg centres and consequently over the parts most concerned in the subsequent palsies. If the first leg affected had been solely and temporarily affected one would have diagnosed the breakage of a damaged vessel. It therefore suggested itself that the second attack of paralysis was due to a similar cause on the other side. Again, as the result of the accident, it seemed scarcely conceivable that a tumour could so soon have developed, and that it had not developed was clear in the absence of the severe headache, sickness, and optic neuritis which a growth so rapid would almost certainly have produced. If an abscess had been set up these three signs might still be wanting, but here the absence of leucocytosis indicated that there was probably no abscess. Hæmorrhage remained as the probable diagnosis. The correctness of this diagnosis was verified at Mr. Harris's very successful operation. We were much indebted to Mr. R. Walker of Clovelly for most careful and important notes of the patient's early condition.

ABERYSTWYTH INFIRMARY AND CARDIGANSHIRE GENERAL HOSPITAL.

A CASE OF UNUSUAL FRACTURE OF THE CLAVICLE.

(Under the care of Mr. R. T. EDWARDS, house surgeon.)

THE patient, who was a young man, aged 18 years, met with an accident whilst at work on the railway. He was coupling two trucks and whilst doing so the engine was set in motion unknown to the patient, with the result that he was more or less crushed between the two buffers. After recovering from the shock produced he walked to the Aberystwyth Infirmary not because he suffered from the usual symptoms of fracture but merely to ascertain whether he had suffered any serious injury. Mr. Edwards watched the patient walking up to the hospital and could not detect the characteristic attitude generally assumed by patients suffering from the results which follow a fracture of the clavicle. Then on examination he failed to find any deformity in the neighbourhood of this bone except that its length was slightly shortened compared with that of its fellow on the opposite side. The usual clinical features present were conspicuous by their absence; that is, the elbow was not flexed, neither was it supported by the opposite hand—in fact, the patient could raise his arm above the level of his head without experiencing the slightest degree of pain. At this stage Dr. Abraham Thomas, the honorary surgeon to the hospital, arrived and he also failed to detect any signs which might go to prove, or even to suggest, a fracture of the clavicle. The youth was detained as an indoor patient and was put to bed in order that fomentations could be applied to some contusion that was present over the shoulder-joint. On the next morning Mr. Edwards discovered that there was a complete fracture through the middle third of the clavicle with the usual displacement, the sternal fragment being slightly drawn upwards by the sterno-cleido-mastoid muscle and the acromial part being depressed by the weight of the arm. The sternal fragment over-rode the acromial to the extent of about a quarter of an inch.

Remarks by Mr. EDWARDS.—Impacted fracture of the clavicle being one that is not commonly mentioned in ordinary text-books on surgery I thought this case to be one well worth recording. In my opinion it appeared to be a case where the force had not been indirectly transmitted, as is usual, through the glenoid cavity to the scapula and thence by the coraco-clavicular ligaments to the clavicle, which force, being of a twisted character would naturally have produced some displacement. Instead, I presume the impact in this case must have been direct on the acromio-clavicular joint and thereby the force being straight in its direction produced the impaction instead of the usual displacement. The unconsciousness naturally produced by sleep, and possibly the position adopted by the patient in bed, produced a relaxed state of the muscles and thus afforded an opportunity for the broken fragments to become manifestly displaced.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

The Economic Value of the Sanatorium Treatment for the Working Classes based upon After-histories.

A MEETING of this society was held on April 26th, Sir R. DOUGLAS POWELL, Bart., the President, being in the chair.

Dr. NOEL DEAN BARDSWELL and Mr. JOHN E. CHAPMAN communicated a paper on the Economic Value of the Sanatorium Treatment for the Working Classes based upon After-histories. They said that their paper dealt with the consideration of the life-histories of 28 consumptive patients who were treated in the Sheffield Royal Infirmary between June, 1899, and March, 1900. These patients were accommodated in two of the general wards of the infirmary specially reserved for the purpose and facilities were made for carrying out the main essentials of the sanatorium treatment—viz., a maximum amount of open air, an adequate diet, and regulated rest and exercise. The diet, which was a modification of a hospital convalescent diet, consisted of breakfast at 6.30 A.M. of porridge, bacon and eggs or fish, bread and butter, and half a pint of milk; half a pint of milk at 10.30 A.M.; dinner at 12.30 P.M. of meat and two vegetables, milk pudding and fruit, with half a pint of milk or beer; tea at 4.30 P.M. of bread and butter or jam, and an egg, with half a pint of milk; supper at 7 P.M. was the same as at breakfast, with half a pint of milk; half a pint of milk was also allowed for each patient during the night. The cases admitted were quite unselected and the proportion of patients with a really good prognosis was very small. Of the 28 admissions 11, or 39 per cent., were clinically hopeless cases, and only 16 or 57 per cent., appeared to have a chance of being restored to a fair working capacity. In eight cases in which the disease had lasted six months two or three lobes of the lungs were involved; in eight cases in which the disease had lasted from six to 12 months three or four lobes of the lungs were affected; and in 12 cases in which the disease had lasted 12 months or more four or five lobes of the lungs were affected. In a table the cases were classified according to their clinical types, the classification being based upon Fowler's description of types of pulmonary tuberculosis. The patients with miliary, acute, caseating, and very advanced fibro-caseous disease, 39 per cent in all, were not appreciably benefited by treatment, and satisfactory results were only obtained in the 57 per cent. who had either fairly recent active disease or chronic slowly progressive mischief of considerable duration. Of the 16 patients who belonged to one of these two classes nine were discharged restored to their full working capacity and seven were sufficiently improved to allow of their return to light work. The ultimate or economic results were then dealt with. A table was given showing the after-histories of the 16 patients who returned to work, the statistics covering a period of four years subsequent to their leaving the infirmary, the basis of the classification being that of their various wage-earning capacities during this period. In the course of four years, of the nine patients who were restored to their full working capacity three died, two were lost sight of during the third and fourth year respectively (their conditions when last heard of being in every way satisfactory), and the remaining four maintained their health and were at full work throughout. Four patients then, certainly, and possibly six, of the nine now under consideration had successfully withstoood the strain of four

years' work and judging from the condition of the two who were lost sight of it was probable that both of them might also still be in good health. The record of the seven patients who were only partially restored to health was less satisfactory, since the expiration of four years found only one of them alive, though up to the end of the third year three of them had remained well enough to do a certain amount of work. The proportion of permanent successes would doubtless have been greater had the social conditions returned to in several instances been satisfactory. The factors which had been chiefly instrumental in determining the ultimate results obtained were the conditions of the patients from the point of view of social economy—viz., the amount of income, financial obligations, and family and conditions at home and at work. The influence of occupation was next dealt with. Dr. Bardswell and Mr. Chapman said that the nature of the employment on which the arrested consumptive depended for his livelihood had such an important bearing upon his future that a decision as to the kind of work he should return to became one of paramount importance. But it was usually difficult for men to exchange injurious occupations for work of a satisfactory nature without incurring considerable financial loss. It was found that no less than 22 out of the 24 men admitted were dependent for their livelihood on occupations to which it would be undesirable for a case of arrested tuberculosis to return and this fact illustrated the great odds that the consumptive working man had to contend against in large cities. Of these 24 men, however, only 15 on their discharge actually resumed work, and of these no less than 12, or 80 per cent., managed to change their employment—a remarkably high proportion. Of the three men who returned to their original employments, two—viz., a cycle mechanic and a stone mason—quickly relapsed, although the former was on clinical grounds a very promising case. The satisfactory occupations were those of Telephone Company's labourer, steward of working man's club, tram conductor, rate collector, workhouse infirmary attendant, van driver, hall porter, and doing odd jobs in Australia. Commercial travelling and working on farms both proved failures, the work in each case entailing too much labour. In conclusion it was said (1) that general hospitals, even when situated in large cities, could do a great deal for their consumptive patients; (2) that the sanatorium treatment could be carried out with a considerable degree of success in institutions other than those especially constructed for the purpose; (3) that to obtain satisfactory economic results patients admitted should be rigorously selected, unmarried men with early disease who are both willing and likely to have the opportunity of returning to suitable employment having the best prognosis; and (4) however satisfactory the immediate results of treatment might be in the case of the working man the risk of subsequent relapse was very great unless his social status allowed of his living and working under at least fairly favourable conditions after discharge.

Dr. C. THEODORE WILLIAMS said that he thought that the results which Dr. Bardswell and Mr. Chapman had obtained could not be considered as satisfactory. They had dealt with such a small number of patients that it was impossible to draw conclusions which could be considered of statistical value. He referred to the work of Dr. J. E. Pollock at the Brompton Hospital who had kept under observation some 3000 cases as out patients and the percentage of those who did well and were able to continue at work was greater than in those observed by Dr. Bardswell and Mr. Chapman. He did not consider that gain in weight was necessarily any indication of the improvement of the patient. He was of opinion that it was of the greatest importance to find suitable occupation for patients after the disease had become arrested and advocated the formation of colonies for tuberculous patients.

Dr. J. KINGSTON FOWLER, after criticising the classification of the cases, said that although the extent of the disease was a most marked factor in prognosis, yet he was more and more inclined to base his prognosis of a case on the temperament of the individual and not so much on the physical signs. Both from the economic and philanthropic points of view it was essential to treat the cases early. The cases which did best were those with limited lesions and unmarried men with no one dependent on them. He did not agree with the last speaker that the results obtained were so very unsatisfactory when it was taken into consideration the unselected cases from which they were derived. As occupation he advocated nursery gardening and said that for two years after the arrest of the disease no more violent exertion than walking should be indulged in. He also advocated colonies for those cases with arrested disease.

Dr. F. RUFENACHT WALTERS said that the cases treated of in the paper were such that they required much longer treatment than they had received. He had seen many cases put on a considerable weight but with no real benefit to the patient. The proportion of early cases, even in the better classes which came for sanatorium treatment, was extremely small and, he should think, did not amount to more than 10 per cent.

Dr. T. GLOVER LYON referred to some 20 cases which he had treated as out-patients at a London hospital. He said that not one of these had recovered sufficiently to return to work. He considered that treatment of these patients in sanatoriums was unsatisfactory, since it frequently produced a moral deterioration which unfitted them for a return to work.

Dr. A. NEWSHOLME said that as medical officer of health he regarded the question from a somewhat different point of view. The young unmarried man without liabilities might, from the economic standpoint, be the case most suitable for treatment, but from the public point of view it was much more important that the wage-earner of the family should be carefully looked after since his life was of greater value to the community. He emphasised the importance of educating these patients in personal hygiene and said that he had often seen the wife and children infected with tubercle by a tuberculous father. The early diagnosis was of great importance and in every case of doubt the sputum should be submitted to an early examination.

Dr. P. HORTON-SMITH said that if good results were to be obtained the cases must be treated early. He suggested that the friendly societies should give full pay to the individual during the early stages of the disease, so as to relieve the patient from all anxiety and to enable him to be treated during the earliest stage of the disease, and in this way the best economic results would be obtained.

The PRESIDENT said that for prolonged treatment of phthisis the wards of a general hospital were quite unsuitable but they were of great value in the treatment of the acute phases of the disease. He thought that the early stages of the disease were more often seen at the general hospitals than at the special hospitals. Some patients applied there on the first manifestation of the disease and he advocated that a few beds should be reserved in each general hospital for the treatment and the careful examination of such cases, and that after a few weeks they should be sent to convalescent homes or sanatoriums. Physicians could only lay down general lines of treatment both in life and work and patients should be taught to live under similar conditions to those they had experienced in sanatoriums. He advocated the formation of colonies for the after-care of patients who had recovered, but only such patients should be sent there who had learnt how to live without being a danger to their fellow men. Although the cases in the later stage of the disease were of no economic value to the community yet they demanded our sympathy and consideration, and for the advanced cases special arrangements should be made where careful feeding and attention were possible without the routine of a sanatorium. The economic output should not be the only outlook of a hospital, and a hospital should not only treat early cases of phthisis but also advanced cases.

Dr. W. EWART was strongly of opinion that it was essential that cases of phthisis should be treated in the wards of a general hospital and not be sent at once to sanatoriums, since the patient was benefited, he was taught to look after himself and to avoid infecting others, and much was to be learnt from the daily observation and treatment of such cases.

Dr. G NEWTON PITT said that although sanatoriums were beneficial it was necessary to have colonies where these patients could work. There was a great difficulty in obtaining suitable employment for partially cured patients. Patients having got used to open air could not work in confined space and the open-air life demanded more food. He suggested that the organisation of work might be arranged in part by the infirmaries and in part by the friendly societies and the parish councils. He said that he had seen great mental deterioration result from sanatorium treatment.

Dr. BARDSWELL replied.

MEDICAL SOCIETY OF LONDON.

Prevention and Early Treatment of Disease.—A Case of Perityphlitis simulating Malignant Disease.

A MEETING of this society was held on April 25th, Dr. F. DE HAVILLAND HALL, the President, being in the chair.

Dr. W. J. TYSON (Folkestone) read a paper entitled "The Prevention and Early Treatment of Disease." He first referred to what had already taken place in the prevention or amelioration of diseases and mentioned ague, septic diseases, diphtheria, myxœdema, and typhus fever, but thought that this work was only an earnest of what was to follow. He then spoke of the future treatment of tuberculosis, cancer, and diseases of the intestinal tract, and referred to the question of milk-supply, saying he trusted that before many years had elapsed pure milk (which he defined as unboiled, unsterilised, and unadulterated milk) would be obtainable by every man, woman, and child, but this would never be effected until an official pronouncement had been made by the heads of the profession on the subject of milk reform. It was pointed out that the Education Act was sadly deficient. Although it provided for the religious and intellectual side of education the purely physical side had been almost completely neglected and no one competent to deal with, or to advise on, this subject had been elected as representing this aspect on the school boards. He suggested that every board throughout the country should comprise some member possessing hygienic knowledge. The natural development or growth of the body was in this order: physical, intellectual, and moral, so that these aspects should be taken up in that order. Large sums of money were wasted in hospitals, infirmaries, dispensaries, and inebriate and other homes for the treatment of patients far advanced in various diseases. The treatment was begun, so to speak, at the wrong end. The physician of the future would be a far more important person than he was to-day, because when general principles of physiology and the laws of health became common knowledge the superstitious belief in futile remedies would cease and quackery would die a natural death. Then medicine would no longer be regarded as the art of curing diseases but as the science of preventing them or safeguarding against such as could not be altogether abolished. The physician would then occupy the position that rightly belonged to him—namely, that of the most important functionary in an enlightened and progressive State.—Dr. G. C. STEELE PERKINS, referring to the subject of the prevention of appendicitis, adverted to the large quantity of frozen food consumed in London which he regarded as a potent cause of the condition. The boiling and sterilising of milk was a most important matter. Many of the processes deprived the milk of its nutriment.—Dr. W. EWART hoped that increased education would lead to the protection of the public. The work of the medical profession in the future must be preventive rather than curative. How to preserve the teeth was a most essential and important question.—The PRESIDENT referred to the difference which 300 years had made in the death-rate from ague in this country. In regard to septic diseases he could remember when he was a dresser two cases of strangulated hernia in which the patients died from septicæmia. The treatment of anæmia (one of the chief causes of gastric ulcer) should be very prolonged and oral sepsis also needed preventive treatment.

Dr. SEPTIMUS P. SUNDERLAND, in the absence of Mr. H. J. CURTIS (now surgeon to the Memorial Hospital, Buluwayo), communicated a paper by them on a case of Perityphlitis simulating Malignant Disease which was completely relieved for 19 months by a lateral intestinal anastomosis, followed by acute abscess of the appendix, appendicectomy, and cure. The patient was a female, aged 36 years, who had had occasional pains and discomfort for several months in the right iliac fossa. She began to have constipation and vomiting and developed a tender swelling in the right iliac fossa and a high temperature. When she was admitted to the Royal Waterloo Hospital for Children and Women she had recently lost a stone in weight. The swelling was regarded as a perityphlitic abscess and the abdomen was opened by Mr. Curtis, a lump as large as a cricket ball being found in close connexion with the cæcum apparently involving the posterior wall of that structure. The appendix could not at that time be found. The lump was regarded as malignant. A lateral anastomosis of the ileum and ascending colon was made. 21 days later the abdomen was again opened with the hope of removing the mass but this was found impossible. 24 days afterwards the swelling, which had been gradually diminishing after the second operation, had almost entirely disappeared. Convalescence was slow but the patient resumed her work five months after leaving the hospital and continued in fair health for a period of 12 months. Pain and tenderness then came on again in the right iliac fossa and a lump as large as a bantam's egg appeared under the scar of the operation wound, with a rise of temperature. A third operation was performed by Mr. Curtis and the appendix was then found free and inflamed, surrounded by a tablespoonful of grey odourless pus, and was removed. The resulting sinus was subsequently excised at a fourth operation and the patient made a complete recovery. The case showed the difficulty which sometimes existed in determining whether a tumour, although exposed by abdominal incision, was malignant or not. Mr. Curtis, on considering the facts of the case, the delayed convalescence, and the subsequent history, now regarded the mass found at the first operation as being probably of tuberculous origin. Dr. Sunderland inclined to the belief that the original swelling was an inflammatory mass due to appendicitis, which disappeared without the formation of pus partly owing to the intestinal anastomosis and regarded the condition found at the second operation as the result of a recurrent attack of appendicitis. Dr. Sunderland regretted the absence of his colleague, Mr. Curtis, to whose careful surgical skill the case owed its favourable termination.—Dr. H. A. CALEY referred to a similar case of a man, aged 72 years, in whom the symptoms resembling malignant disease turned out to be inflammatory. Great caution was required in the diagnosis of such conditions.—Mr. J. D. MALCOLM referred to two cases, one of ovarian disease and one of cæcal disease, bearing on the question of diagnosis.—The PRESIDENT mentioned two cases presenting the symptoms of appendicitis which were found to depend on malignant disease.

CLINICAL SOCIETY OF LONDON.

Exhibition of Cases.

A MEETING of this society was held on April 22nd, Dr. FREDERICK TAYLOR, the President, being in the chair.

Mr. F. J. STEWARD exhibited a case of Moveable Knee-joint three and a half years after operation for extensive tuberculous disease. The limb had remained in a plaster-of-Paris splint for two years. No attempts had been made to produce movement.—Mr. T. CRISP ENGLISH referred to a case of tuberculous disease of the ankle in which spontaneous movement had supervened after operation and also to a case of acute septic arthritis of the knee-joint following gonorrhœa in which similar results had been obtained after freely opening the joint.

Dr. F. PARKES WEBER exhibited a case of Polycythæmia with Enlarged Spleen and Chronic Erythromelalgia. The patient was a married woman, aged 36 years, who had previously had good health but after her last confinement, seven years ago, she suffered from "inflammation of the womb" with swelling of the whole of the left lower extremity, which lasted a month. Burning sensations in both feet appeared about three years ago and when first seen in 1903 the feet were turgid with blood, hot and painful. All these signs were much more prominent in the left foot. At the present time the erythromelalgia was practically limited to the left foot, the skin over which presented several discrete purplish patches. The spleen was enlarged but there was no cyanosis. An examination of the blood showed that the hæmoglobin was about 125 per cent. of the normal; the red cells were 9 000,000 per cubic millimetre and the white cells were 8100. Polymorphonuclear leucocytes were 73·75 per cent. The heart and lungs were normal. The pulse was 88, regular, and of rather increased tension.—Dr JAMES GALLOWAY said that Dr Weber's case appeared to resemble the original conception of erythromelalgia as described by Weir Mitchell, for arterio-sclerotic changes were certainly not prominently marked in this case. Many of the cases recently described showed that the condition could be well simulated as a result of vascular degeneration and he referred to a case under his own care in the Charing Cross Hospital from an examination of which he had come to the conclusion that cases of redness, pain in one extremity, leading to necrosis, in an adult over

middle age were more likely to be due to ischæmia of arterio-sclerotic origin than to true erythromelalgia. He thought, moreover, that a revised classification of these cases was called for, based upon the blood changes rather than upon the actual condition of the vascular walls.—Dr. WEBER replied.

Mr. T. H. OPENSHAW showed (1) a case of Firm Ankylosis and Contracture of the Left Knee treated by elastic steel bar traction in a patient, aged 15 years, who had been able to walk about during the application of the apparatus; and (2) a case of Osteo-arthritis of the Knee-joint following a Fracture of the Femur, improved after removal of pressure by means of a splint which had transferred the weight of the body from the pelvis to the ground, thus giving the affected joint rest.—Mr. LAWRIE H. MCGAVIN took exception to the term "osteo-arthritis" being applied to the case. The pupillary changes suggested Charcot's joint disease.—Dr. W. P. HERRINGHAM concurred in this view.—Mr. OPENSHAW admitted that the case might be one of tabetic arthropathy but said he had shown the case mainly to demonstrate the value of removing pressure from the joint by the appliances exhibited.

Dr. W. J. HARRIS exhibited a girl, aged 20 years, the subject of Acromegaly. The disease was in an early stage, the symptoms having only appeared about two years ago. She had suffered from slight epileptiform attacks and headache. Prognathism was well marked and the hands were enlarged. There were no urinary or ocular changes. She was 5 feet 5 inches in height and appeared to be still growing.

Dr. W. LEE DICKINSON showed a woman, aged 27 years, with Congenital Heart Disease. She was not cyanosed and there was a long rumbling murmur audible in the second left interspace close to the sternum, occupying the whole cardiac cycle, accompanied by a thrill. The pulmonary second sound was indistinguishable. A provisional diagnosis of patent ductus arteriosus was made.—Dr. WILLIAM PASTEUR asked whether the murmur was heard at the back.—Dr. HERRINGHAM referred to the great difficulty which was almost always experienced in arriving at such a diagnosis and suggested that the lesion was chiefly confined to the pulmonary artery.—Dr. HARRIS agreed in the diagnosis of patent ductus arteriosus and said that the murmur bore a strong resemblance to that which he had heard in a case where an aneurysm of the aorta had ruptured into the pulmonary artery.—The PRESIDENT also concurred in Dr. Dickinson's diagnosis and remarked that several cases had been recorded in which the diagnosis of patent ductus arteriosus made during life had been subsequently confirmed at the necropsy and he referred to one published by the late Dr. Hilton Fagge in the Guy's Hospital Reports in which a long wavy murmur was heard in that situation.—Dr. DICKINSON replied.

Mr. R. P. ROWLANDS showed a case of Congenital Malformation and Deformity in a woman, aged 30 years. The principal defects were absence of the ear and seventh and eighth cranial nerves. There were complete facial paralysis and nerve deafness on the left side. Portions only of the external ear were present. There was also an absence of the radius and part of the humerus on the same side, with abnormal smallness of the shoulder, scapula, and clavicle. Two metacarpal bones were absent while there were only four carpal bones.—Mr. MCGAVIN inquired as to the condition of the Eustachian tube upon the affected side and Mr. ROWLANDS replied that this canal was present but that the catheter passed a shorter distance than normal, the tympanum being absent. The non-development of the two cranial nerves, including the pars intermedia, explained the loss of taste which also existed over the left half of the tongue.

Mr. ROWLANDS also showed a case of Premature Puberty in a child, aged two years, in whom the external genitals were similar to those of a boy aged 15 years. In the few recorded cases of this condition it had been generally found that senile changes commenced at a much earlier age than usual. Such cases appeared to represent a reversion to the lower animals.

Mr. CHARTERS J. SYMONDS exhibited a man, aged 45 years, with Gangrene of the Tips of the Fingers of Both Hands. The condition had begun two years ago. He was a horse-keeper but had not been exposed to cold more than this occupation would suggest. There was no arterial or nervous disease or any diabetes. The patient was under the care of Mr. C. H. Golding-Bird at Guy's Hospital.—Dr. PASTEUR thought that the possibility of Raynaud's disease could not be excluded, especially as some cases of that disease went on to the more profound changes without the earlier ones being specially manifest.

Mr. SYMONDS also showed a man, aged 42 years, in whom a Spontaneous Fracture of the Neck of the Femur had occurred while he was kneeling to open a cupboard.—Mr. A. A. BOWLBY said that the fact that one of the earliest signs of tabes dorsalis might be spontaneous fracture was hardly sufficiently appreciated. He referred to two cases in which this accident preceded all other signs of the disease.—Mr. SYMONDS replied that there were as yet no definite signs of locomotor ataxy in his case with the exception of a suspicion of some insufficiency of the ocular muscles.

EDINBURGH OBSTETRICAL SOCIETY.

Obstructed Labour.—Thyroid Relations in Obstetrics and Gynæcology.—Effects of Thyroidectomy.—Exhibition of Specimens.

A MEETING of this society was held on April 13th, Dr. N. T. BREWIS, the President, being in the chair.

Professor JARDINE read Clinical Notes on a series of 22 cases of Obstructed Labour, including eight cases of induction of premature labour, four cases of symphysiotomy, and ten cases of Cæsarean section. During 1903 Professor Jardine and his colleagues treated 703 cases in the Glasgow Maternity Hospital. Among these were 98 cases of contracted pelvis—an extraordinary proportion of 1 in 7; this, however, did not by any means include all but only those in which there was difficulty in delivery. Details of eight cases of induction of labour and four cases of symphysiotomy were given. In the eight cases of induction of labour the conjugatæ veræ varied from three and a quarter inches to three and five-eighths inches; seven of the mothers recovered and one died. In the first of the four cases of symphysiotomy the patient was a tripara, having a conjugata vera of three inches; her previous deliveries had been by craniotomy. The symphysis was opened by cutting directly down on it; forceps was applied and the head was extracted without difficulty in the Walcher position; the child was alive and weighed seven and a half pounds. Strong catgut sutures were inserted through the fibrous structures and the wound was closed with silkworm gut. The patient recovered and was able to walk without inconvenience. In the second case the woman was a quintipara, having a conjugata vera of three and three-quarter inches. Former children had been born with difficulty with the aid of forceps, one child being dead. In this labour forceps failed to effect delivery so symphysiotomy was performed. Even then considerable traction was required before the child was born; the infant was alive and weighed 11½ pounds. The patient recovered. In the third case the woman was a primipara, having a conjugata vera of three inches; the pelvis was flattened and generally contracted. In performing the operation difficulty was experienced in dividing the symphysis half-way down. As this might have been due to a bend the knife was turned a little to the left when the bone suddenly yielded and the joint gaped. Professor Jardine found that the bone had given way into the obturator foramen and at the same time the left ramus had fractured about the junction of the ischium and os pubis. The child was delivered alive by forceps, the weight being seven and a half pounds. During delivery the fractured end of the ramus caused laceration of the vagina. The symphysis and fractured ramus were sutured with catgut and the patient was afterwards douched and packed carefully. She made a good recovery and there was good union of the bones. In the fourth case the woman was a tripara, having a conjugata vera of three and a half inches. Previous children were born dead. After division of the symphysis the child was born alive with forceps, the weight being eight and a half pounds. There was free hæmorrhage from the wound which was found to be due to the rupture of the distal end of the urethra from the vaginal wall, but after the insertion of a catheter this was united by sutures. The patient's progress was satisfactory. It was doubtful whether symphysiotomy would become a favourite operation. There was great risk of laceration if much separation was required to effect delivery. Another objection was the prolonged nursing required after the operation. To obtain union the patient must lie very still

which was very trying, especially when the calls of nature required attention. Convalescence in these cases varied from 31 to 42 days. Professor Jardine then gave details of ten cases of Cæsarean Section. All the mothers recovered. The method of operating consisted in making an incision about five inches in length high up, so that two-thirds of it lay above the umbilicus, and then incising the uterus longitudinally in the middle of the anterior wall so that the top of the incision would be at the fundus. Cameron's pessary was generally used to prevent bleeding from the uterus while incising it. The child was delivered by grasping a leg. In nearly every case the child required to be resuscitated, probably due to the effect of the cold on opening the abdomen causing the child to make inspiratory efforts and to draw liquor amnii into the lungs. The placenta was found on the anterior wall in nine-tenths of the cases. Catgut sutures were employed for the uterus and silk to tie the tubes. Silk and celluloid thread for uterine sutures often gave great trouble, even for months afterwards. If a patient had been in labour for some time and repeatedly examined without aseptic precautions the risks from Cæsarean section were greater than if she had been under observation before labour and had been properly prepared for the operation. Sterilising the patient at the operation was best done by tying the tubes with silk and dividing them. This should only be done if the husband and wife desired it. Professor Jardine left the uterus and ovaries even if the patient had had her tubes tied.—The paper was discussed by Dr. HAULTAIN, Dr. JAMES RITCHIE, Dr. W. FORDYCE, and others.

The SECRETARY read a paper by Dr. R. C. BUIST (Dundee) on three cases illustrating Thyroid Relations in Obstetrics and Gynæcology. The first case was one of myxœdema with cystocele and prolapse in which ventrofixation was performed. The second case was one of myxœdema and pregnancy. Dr. Buist could only obtain record of one other case, that of Herrgott,[1] the patient being an undeveloped woman, aged 18 years, who had 12 eclamptic fits during labour and eight after delivery. There was only a trace of albuminuria. Dr. Buist's patient was 48 years of age and she had had 11 children. Labour occurred spontaneously, there were no fits, and the thyroid treatment was continued. The third case was that of a woman, aged 37 years, who had shown enlargement of the thyroid in successive pregnancies. Eventually she died from a malignant tumour in the neck.

Dr. H. OLIPHANT NICHOLSON read a communication referring to experiments in feeding made on thyroidectomised animals.

Dr. D. CHALMERS WATSON gave a Demonstration of Specimens illustrating the experimental influence of a pure raw-meat diet on the thyroid and parathyroid glands. The thyroid was increased to many times its normal size and was of the nature of a hypertrophy; the parathyroid also was greatly enlarged.

Dr. F. W. N. HAULTAIN showed a Calcified Full-time Fœtus which had been retained in the Abdomen for 41 years and which was removed post mortem.

Professor R. JARDINE (Glasgow) showed a Modification of Braun's Decapitating Hook in which a knife edge was inserted on the concavity of the hook, facilitating greatly the division of the structures of the neck.

HARVEIAN SOCIETY.—A clinical evening of this society was held on April 14th, Dr. C. Theodore Williams, the President, being in the chair.—Dr. Leonard G. Guthrie showed a man, aged 38 years, who during three years had gone through the following phases of Insular Sclerosis. In 1881 he had a temporary attack of hemianæsthesia and in 1894 paræsthesia of the hands and feet and loss of power in all the extremities with recovery in a fortnight. In 1895 he was admitted to the National Hospital for the Paralysed and Epileptic, Queen-square, with weakness of the lower limbs and difficulty in micturition (sphincter). Right-sided hemiparesis, with loss of sensation, tactile and painful, in front of the thighs, was found. There was no nystagmus or affection of the cranial nerves. Speech was normal, the knee-jerks were brisk, and there was no ankle clonus. The optic discs were normal. Recovery was apparently complete in about three months. In 1898 weakness of the legs reappeared and in 1900 he could not walk without help but again he improved and was able to return to work. In January, 1901, he was readmitted to hospital with loss of power and slight incoördination in the hands, ataxic spastic gait, exaggerated deep reflexes, and extensor plantar reflexes; there was no ankle clonus or other symptom. Sensation to pain and touch was blunted below the umbilicus. The patient improved steadily at first and anæsthesia practically disappeared. Then he had a relapse and became unable to walk without assistance, whilst there was marked increase in spasticity. Once more he improved steadily and could walk without help. At the end of 1901 he was slowly getting worse and his gait was very ataxic and spastic. At present there was very slight nystagmus on lateral deviation. The optic discs were normal. Speech was stuttering but not scanning or syllabic. There was no wasting of the muscles and sensation was normal. The muscular powers of the upper extremities were fair. There were very slight "intention" tremors. The abdominal and back muscles were paretic at times. The lower extremities were not wasted, ataxic, or spastic, but the muscles showed varying degrees of weakness of different groups. The gait was neither spastic nor ataxic but weak and uncertain. The knee-jerks were active, not exaggerated; there was ankle clonus (spurious) at times; the plantar reflexes were sometimes absent, sometimes extensor on one or both sides. The electrical reactions were normal. The muscular paresis varied greatly and was worst under the influence of emotion or after fatigue. If left alone he could get up, wash and dress himself, and walk about with the aid of sticks, and he seldom fell. But if notice was taken of him he became flurried and nervous with walking and presently fell like a tree and became completely paraplegic and exhausted for the time being. The influence of emotion in increasing general paresis was so marked that he (Dr. Guthrie) had regarded the condition as one of functional myasthenia until the history clearly pointing to relapsing and remittent insular sclerosis was forthcoming.—Dr. J. S. Risien Russell and Dr. Wilfred Harris took part in the discussion.—Dr. Risien Russell showed a case of Myasthenia Gravis in a young woman, aged 28 years, whose illness began about a year ago and in whom many of the characteristic phenomena of the affection were present, including the myasthenic reaction on faradic excitation by the muscles. The symptoms were not, however, always made worse by muscular exertion, nor were they more pronounced at the menstrual period, and they disappeared in a remarkable manner ten months ago but returned eight months later. Some impairment of resonance over the manubrium sterni suggested the possibility of enlargement of the thymus gland.—Dr. Guthrie called attention to the association of thymic and mediastinal growths with myasthenia gravis.—Mr. J. Jackson Clarke showed a girl, aged seven years, on whom over two and a half years ago he performed Costotransversectomy for obstinate paraplegia due to tuberculosis at the level of the fourth dorsal vertebra. The patient was shown at the Clinical Society two years ago, since when the mode of treatment had been successfully followed in similar cases. Paraplegia in spinal disease frequently yielded to rest and general treatment but there were two indications for operation—firstly, when total motor and sensory paralysis, including the bladder, supervened rapidly, and secondly, when in the more ordinary type of case in which the paralysis was chiefly motor rest had been given a fair trial without success. If performed with due care costotransversectomy was less dangerous than laminectomy and on other grounds was preferable to it. In the present case there was no return of paralysis after the operation and the patient was allowed to walk with the spine well supported by a modified Chance's splint.—Dr. Edmund Cautley showed a case of Cerebral Syphilis. The patient was a man, aged 22 years, who had been admitted to the Metropolitan Hospital for lassitude and headache of three months' duration and vomiting for three weeks. He was treated at the Lock Hospital for 18 months and still showed the remains of a specific rash. His hair came out a year ago and on admission he was almost bald. His mental condition was dull but he had distinctly improved under a month's treatment and there was a free growth of white hair becoming dark in places. The knee-jerks were exaggerated, there were no ocular changes, and the headache had ceased. The condition was doubtless due to a mild form of endarteritis.—Dr. Wilfred Harris showed two

[1] Annales de Gynécologie et d'Obstétrique, July, 1902.

cases of Lead Paralyses. These cases illustrated two types of lead paralysis; both showed the ordinary form of wrist and finger drop with escape of the supinator longus and the extensor ossis and primi internodii muscles of the thumb. In addition one had complete paralysis of the two deltoids and supra- and infra-spinatus muscles, the remaining arm muscles escaping, while the other case had complete atrophy of the intrinsic muscles of both hands, a condition which was due to a symmetrical subacute poliomyelitis and which was permanent, while the forearm and upper arm paralyses were due to neuritis and would almost certainly recover.—Mr. T. Crisp English showed three cases. 1. A case of Goitre with unusual symptoms in which he had removed hypertrophied lateral and middle lobes. The patient, a girl, aged 17 years, had had exophthalmos, tachycardia, palpitations, and tremor, while there had been also a myxœdematous condition of the skin; the operation had been performed on account of severe dysphagia. This combination of symptoms was rare. The general conditions had improved. 2. A case of a large Gumma of the Knee-joint which was of old duration and was sloughing. 3. A case of Encephalocele in the left frontal region which was increasing rapidly in size and demanded early treatment if such were advisable.—Mr. E. Percy Paton considered that the interesting feature of the second case was the thickening of the synovial membrane and possibly cartilage changes which in other circumstances might lead to an erroneous diagnosis of osteo-arthritis.—Mr. E Laming Evans showed a case of Congenital Absence of the Fibula in a female, aged four months. The whole leg was small; the characteristic curve in the lower third of the tibia with a depressed scar or dimple at the point of maximum convexity was present. The metatarsal and phalangeal bones of the fifth toe were absent; the foot was in well-marked equino-varus. A skiagram confirmed the complete absence of the fibula. No history of deformity in the family or of injury during pregnancy was obtainable.

BRITISH BALNEOLOGICAL AND CLIMATOLOGICAL SOCIETY.—A meeting of this society was held at Hanover-square, London, W., on April 14th, Dr. Alfred F. Street (Westgate), the President, being in the chair.—The discussion on Obesity, which was opened by Dr. Leonard Williams at a previous meeting on Feb. 3rd, was reopened by Dr. William Bain (Harrogate). Dr. Bain dealt with the subject from the physiological standpoint. Excessive fat deposition was either due to an abnormal production of fat or to diminished oxidation. Fat formation was chiefly linked with carbohydrate metabolism. The normal utilisation of fat was also considered. As regarded treatment he said that the essential elements were regulated exercise, the restriction of the carbohydrate and fatty materials of the food, living an outdoor life if possible, accelerating heat loss, and combating any tendency towards anæmia.—Dr. Robert Barnes considered that to elucidate the question of obesity it was desirable to study the conditions of race, climate, and food. He had been struck with the extreme leanness of the Arabians of the working class, most of whom were extremely active and fed mainly on vegetables. This applied also to the horses and cattle which were sparingly fed. He had noticed some exceptions in the persons of policemen and dragomans and other people who came in contact with the visitors. On the northern coast of the Mediterranean he noticed the general fatness of the inhabitants. Was this because they fed largely on macaroni?—Dr. S. D. Clippingdale referred to the frequency with which a state of obesity was found in persons of high intellectual capacity, contrary to the usual belief, giving several instances in the present and past times, and referred to Julius Cæsar's well-known dislike of thin persons.—Dr. E. Symes-Thompson pointed out that as life assurance experience showed how dangerous to life obesity was proved to be it behoved them to utilise to the utmost spas and climate treatment, to encourage exercise, to promote metabolism, and to raise the health level of their patients.—Dr. Alexander Morison maintained that undue mystery had been cast around both adult and infant feeding. The principles of nutrition were clearly known and their application was sufficiently clearly indicated by each case considered on its own merits. He pointed out the importance of separating obese cases with, from those without, anatomical organic disease. In the former the general force of the patient must be improved before his fat reduction by restricted diet was commenced.—Dr. W. Bezly Thorne drew attention to the fact that Bouchard placed obesity in the class of affections which he had denominated "l'arthritisme," that it was common in the subjects of gout and rheumatism of which venosity was a recognised concomitant, as well as in those who were deficient in hæmoglobin or had suffered from prolonged loss of blood. He recalled the fact that the obese were specially liable to angina pectoris and to death from syncope and to apoplexy consequent on atheroma. Such considerations, he said, pointed to a potent cardio-vascular factor in obesity and emphasised the danger of treating that condition on lines of arbitrary dietary restriction.—Dr. W. Ewart alluded to the distinctions between physiological stoutness which ran in families and needed no treatment and that which was pathological. The latter was generally admitted to depend upon relative deficiency in oxidation. This was to be remedied by various methods which had been fully discussed. The question arose whether oxygen itself, administered by inhalation, might not be of service. He was unable to furnish any definite results from systematic observations but his general impression was that the free use of oxygen tended to reduce rather than to increase body weight and he would be glad to hear the experience of other clinical observers on this point.—Dr. D. Baynes had found that high-frequency currents on alternate days with galvanism, using currents of from 80 to 150 milliamperes, speedily reduced the most corpulent and quickly relieved the dyspnœa due to fatty heart. These currents were applied by large well-covered electrodes placed over the abdomen, loins, thighs, and buttocks.—Dr. Nightingale, after referring to the precautions taken in the tropics against chills, drew attention to the value of the high-frequency current in the reduction of obesity; he had found that there was an immediate loss of weight varying from a quarter to two pounds after each application of the current, and that it was possible to decrease the weight by from 7 to 14 pounds in a month without any injurious effect.—Dr. Joseph Groves (Carisbrooke) said that on entering the world everyone was different; in passing through life everyone differed in environment and occupation and in middle age the resultants of various influences necessarily differed widely. The duty of the physician was to obtain conformity to nature's laws and not to a type. Special dietetics and "high frequency" notwithstanding many people continued stout and the pressure of over-exertion upon organs worn by the stress of existence was checked. They might as well try to treat obesity apart from natural laws as to deal with ventilation without reference to the law of the diffusion of gases.—Dr. Septimus Sunderland considered it was necessary to warn patients who showed signs of commencing pathological corpulency to begin to take the requisite precautions against its increase in the early stage; they would then see fewer cases of excessive stoutness the reduction of which was sometimes attended with risk. He referred to the abuse of thyroid gland extract with which some people dosed themselves without medical advice and mentioned the case of a woman who had recently reduced her weight about one and a half stones in a few weeks by the self-administration of 45 grains of the extract daily.—The President said he wished that there had been put forward some explanation of the personal element as a cause of obesity and pointed out that this alone would suffice to condemn the distribution of printed dietary lists. He could not agree that abstinence from fluid at meals diminished the tendency to obesity only by providing space for the ingestion of more food but there did seem to be evidence that abundance of fresh air—i.e., increased percentage of oxygen—did so act, perhaps by hastening the oxidation of the food taken.—Dr. J. T. Leon (Southsea) and Dr. J. Braithwaite (Buxton) also made remarks.—Dr. Bain and Dr. Leonard Williams replied.

EPIDEMIOLOGICAL SOCIETY.—A meeting of this society was held on April 15th, Dr. B. A. Whitelegge, the President, being in the chair.—Dr. T. M. Legge, medical inspector of factories, read a paper on Industrial Anthrax, dealing with 211 cases reported to the chief inspector during the years 1899-1903 inclusive. These cases were about equally divided between workers in wool and worsted, hides and skins, and horsehair and bristles, with a few in other industries. The fatality was much less than formerly, averaging 26 per cent., and not differing greatly from that observed in France, Germany, and Italy, excepting the outbreaks reported by Eppinger among a group of rag sorters in Austria where 78 cases out of 88 were fatal. These, however, were of the internal form, to which five only of the 211

belonged. Of the 72 occurring among wool workers 56 were of persons employed in sorting and combing the classes of wools scheduled as dangerous, so that calculated on this limited number of workers the attack figure was 1·3 per cent. and for workers in horsehair factories, excluding those in brush and bristle works, it was 1·5 per cent. Of the 72 cases among wool workers 41 were in Bradford and 11 were in Kidderminster. Of the 69 derived from hides and skins 38 were in London and 18 were in Liverpool, while of those from horsehair 23 were reported from London, other towns and districts contributing from one to nine only in each group. The dangerous wools were those from China, Russia, Siberia, Persia, and Syria, and in like manner the cases of anthrax due to hides were almost limited to the ports of London and Liverpool. Of the whole 211 cases the seat of infection was the neck in no fewer than 84, the face and head in 77, the forearm in 16, and, strange to say, the finger only once and that open to doubt. The fatality was highest among patients attacked in the neck and face. In 143 cases excision of the pustule was practised but it was difficult to say what amount of benefit resulted from any one kind of treatment. Professor Sclavo of Siena had, however, prepared a serum from inoculation of sheep and had treated 164 consecutive cases with a fatality of 6·09 per cent., one woman recovering in whose blood the bacilli were already seen and the only fatal cases being those in which the patients were moribund when the injection was made. The question of disinfection was beset with difficulties, for no effective method of destroying the spores of anthrax was known except heat, the employment of which would be destructive of hides and wool. Current steam was, however, already extensively used in England, Germany, and elsewhere for horsehair and was found to be most successful and least, or practically not at all, injurious when at a temperature between 200° and 225° F. and a pressure of from two to two and a half pounds for half an hour. Chemicals ruined wool, though formalin was worth further trial. Anthrax bacilli retained their vitality through all the tanks of the tanyard. In fact, save as regards horsehair, the only available means were thorough cleansing of the raw materials so far as possible by wet methods and with every precaution to prevent the diffusion of the dust which with all refuse should be burnt and not used, as it often was, for manure, nor should the waste water be turned into streams, at least unless after boiling, for many valuable horses and cows had been thus infected and lost. The workpeople, too, should be protected by clothes, plain, fitting closely round the neck, wrists, and ankles, kept at the factory and frequently boiled and washed; they should wear gloves and also respirators or veils when specially exposed to dust.—Dr. W. Arnold Evans, medical officer of health of Bradford, said that there were dangerous wools among the unscheduled ones and that he had found all disinfection to be ruinous to wools.—Mr. Webb, of Worcester, a horsehair manufacturer, said that he had in conjunction with the county medical officer and analyst conducted numerous experiments and cultures. He had often found the bacilli in the dust and had had some cases among his workpeople, but besides other precautions he had since 1897 employed current steam in a Lyon's disinfector at the moderate pressure and temperature recommended by Dr. Legge and by the German Home Office. It was remarkable that when the dust from carding contained no spores that separated by subsequent steaming often did, the moisture having detached organisms that had resisted mechanical processes. He described his visit to the factory of Signor Pachetti of Milan who employed 1500 workpeople and had independently adopted the same methods as himself.—Dr. W. H. Hamer said that he thought the 30 000 cases with 5000 deaths said to have occurred in ten years in Italy were incredible unless other diseases were included.—Dr. H. Franklin Parsons, in reply to Dr. H. T. Bulstrode's request for information as to non-industrial anthrax, said that it was occasionally met with among butchers and he believed that many cases occurring on farms were due to pollution of the streams. Cooking destroyed the bacilli for he knew a case in which the farmer and butcher who cut up the carcass of an infected animal both died within a week but no ill consequence followed the consumption of the flesh which, except the tongue, was all sold in the open market and could not be traced.—Dr. H. R. Kenwood, Mr. Wolf Defries, and others also took part in the discussion.—Dr. Legge, in his reply, said that of non-industrial anthrax 32 cases had been reported to him among butchers. These he believed to be far from all, but from the arms being oftenest the seat of infection the mortality was low. Anthrax was very prevalent in South America but in that country it was very mild in man. 200 cases without a death had been reported.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on April 22nd, Mr. C. Richardson, the President, being in the chair.—Dr. A. E. Porter read a paper on the Administration of Prophylactic Injections of Antitoxin to Persons who had been Exposed to the Infection of Diphtheria. He mentioned the results of this mode of procedure in Essex during the years 1900-01. Out of 136 persons in 24 households only one subsequent case occurred after the injection and this was a very mild attack. Of the remaining eight persons in the same houses who were not injected there were three cases of diphtheria. During the same epidemic there was another series of 24 similar households in which no injections were given and one-sixth of all the inmates, excluding the primary cases, subsequently contracted diphtheria. In neither series was it possible to maintain satisfactory isolation. The employment of prophylactic injections in Cambridge, Toronto, New York, and Chicago was quoted. Dr. Porter considered that for the majority of persons exposed to infection 500 units conferred protection for about three weeks. Failures occurred in a small percentage of instances but the subsequent attacks were of a very mild nature and the administration of antitoxin was especially advisable during an epidemic prevalence of diphtheria when ordinary measures failed to localise the disease and also in the case of institutions containing children. It was mentioned that among persons so protected a considerable proportion were infective and that care should consequently be taken to prevent them from mixing with unprotected individuals.—Dr. A. H. Bampton, Dr. J. G. Sharp, and Dr. W. H. Cheetham took part in the discussion.—Dr. A. F. Dimmock described a New Method for the Estimation of Uric Acid in Urine. He had devised this method in conjunction with Mr. F. W. Branson, F.C.S., their aim having been to work out a simple process which did not require much time. A definite amount of urine was saturated with chloride of ammonium and the precipitated urate of ammonium was collected and carefully washed. This was placed in a closed bottle and by reaction with hypobromite of sodium the evolved nitrogen was collected in an apparatus similar to that used for the determination of urea. The volume of gas was noted and from this the uric acid present in the urine was calculated. Experiments with chemically pure uric acid had given excellent results.—Mr. H. J. Roper read notes of Two Cases of Intussusception which had occurred in Children and which he had reduced after abdominal section. In one case the symptoms had lasted four days and in the other for less than 24 hours. Both children recovered. Their ages were eight and a half years and 12 months respectively.—Mr. H. Littlewood and Mr. R. Lawford Knaggs took part in the discussion.—Mr. J. Tregelles Fox read a paper on the Mechanism of the Alimentary Canal. He discussed the mode of propulsion of its contents and advanced the opinion that a mechanism different from mere peristalsis could be traced in most if not all the divisions of the human alimentary tract. The object of the paper was to promote a better comprehension of the causes of constipation and allied complaints. A typical diurnal revolution or cycle of the alimentary system was described and its modifications to suit the various climates, races, and occupations of mankind were alluded to.—Cases and pathological specimens were shown by Mr. G. C. Hayes, Mr. W. H. Brown, Dr. A. G. Barrs, Mr. Littlewood, Mr. A. L. Whitehead, Mr. B. G. A. Moynihan, Dr. J. B. Hellier, and others.

LIVERPOOL MEDICAL INSTITUTION.—A meeting of this society was held on April 21st, Dr. James Barr, the President, being in the chair.—Dr. K. A. Grossman exhibited two different colonies of Tænia Solium from the dog—one from a pug and the other from a collie. They showed marked differences—viz., that from the pug had a club-shaped head, a long thin neck, was flat and transparent, and had small hooklets arranged in irregular rows three deep; that from the collie was larger and altogether thicker set, showed hardly any neck, and shorter, thicker, and more opaque proglottides. The hooklets were 16 in number and much larger than those in the worm from the pug.—Mr. R. C. Dun showed the following specimens: 1. Volvulus of the Small Intestine in a child in whom the whole of the jejunum

and ileum was implicated. Two complete twists of the root of the mesentery had occurred from right to left. There was mesenteric disease present in the shape of numerous hard enlarged glands, probably tuberculous in nature. From the position of the cæcum which occupied the epigastric region when the abdomen was opened it seemed probable that a common mesentery had existed for the small intestine, cæcum, and ascending colon. 2. Embolism of the Pulmonary Artery obtained from a child, four years old, who died with extreme suddenness four hours after osteotomy of both tibiæ.—Dr. A. S. F. Grünbaum showed Sections from the Lung and Bronchial Glands of a mouse which had been infected per os with blastomycetes from a carcinoma mammæ. The changes were those usually seen, the interest being in the mode of infection.—Dr. W. B. Warrington demonstrated the nature of the Cells and Micro-organisms found in the Cerebro-spinal Fluid withdrawn by lumbar puncture in cases of Tuberculous Postero-basic and Vertical Meningitis.—The Stomach, Intestines, and Liver were shown from a case of poisoning by corrosive sublimate under the care of Dr. J. Lloyd Roberts.—Dr. Grünbaum gave a demonstration of models illustrating Ehrlich's Theory of Immunity.—Dr. T. R. Glynn showed a large series of coloured drawings illustrating various Lesions of the Heart.—Mr. F. T. Paul reported two cases of Cancer of the Bladder in which he removed during life the growths shown. The first case occurred in a female, aged 63 years. The growth was three-quarters of an inch in diameter, it was removed suprapubically with bladder scissors, and the base was cauterised with Paquelin's cautery. The second case was that of a female hospital patient, aged 69 years. In this case the tumour measured two inches across and was removed with the knife after splitting the urethra back well into the bladder through the vagina. Histologically the tumours were examples of the large-celled carcinomata of the bladder epithelioma type, but showed no nest cell groups. In the second case the carcinoma began in a small villous tumour which was still present at the upper end of the growth.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY.—A clinical meeting of this society was held at the West London Hospital on April 8th, Dr. Seymour Taylor, the President, being in the chair.—Dr. P. S. Abraham showed a case of Molluscum Contagiosum in a girl, aged eight years. He also showed a case of Creeping Linear Dermatitis. The patient, a delicate, ill-nourished girl, aged seven and a half years, had suffered shortly after birth from an abscess in the right breast, which had gradually travelled right across the chest, leaving a serpiginous, slightly pigmented irregular line, marked by numerous whitish pits, evidently the sites of the little abscess. The case strongly resembled the "creeping eruption" described by Dr. R. H. Lee in 1894 and 1884, and to some extent those cases due to the subcutaneous burrowing of an œstrus larva. The term "larva migrans" had been applied to all these cases of creeping linear lesions, in Dr. Abraham's opinion incorrectly, as a certain number, like the case shown, had nothing to do with a migrating larva. Excision of the advancing end of the creeping line and careful microscopic examination was the treatment proposed.—Dr. H. Campbell Pope referred to a case of Molluscum Contagiosum recently under his care in an adult in which there were a large number of mollusca scattered over the body. The case had at first been considered to be one of varicella but the duration of the eruption and the typical appearance of the tumours led to a correct diagnosis. The application of pure carbolic acid to the individual tumours, a few at a time, effected a rapid cure.—The President showed a woman, aged 23 years, who had been admitted into the hospital on account of Extreme Emaciation. She had steadily refused food except under great persuasion for a period of six months. Mentally she was suspicious and obstinate and at times refused to reply to any questions. There was no evidence of physical disease and the case was considered to be one of anorexia nervosa. At first forced feeding by a nasal tube was necessary but gradually the patient was induced to take a fair quantity of nourishment. Such cases usually recovered under Weir-Mitchell treatment but the mental condition of many of these patients was on the border-line of insanity.—Dr. J. D. E Mortimer said that unremitting supervision was necessary in the treatment of such patients, as it was impossible to foretell whether sudden suicidal impulse might not arise. The association between melancholia and malnutrition was a close one and he agreed with Dr. T. S. Clouston as to the necessity for "feeding up" and "fresh air" in such conditions.—Dr. J. B. Ball showed a case of Melanotic Sarcoma of the Soft Palate. The patient, a man, aged 53 years, had noticed black patches on the roof of his mouth for about two years and about 15 months later a growth appeared on the soft palate. This led to no inconvenience till three weeks ago when hæmorrhage caused him to seek medical advice.—Dr. Ball also showed a girl, aged 17 years, who had come under his care four weeks previously complaining of Swelling of the Left Cheek. The case was considered to be one of antral cyst. The treatment consisted in evacuation of the fluid through the anterior wall of the antrum and recovery was rapid without deformity of the face.—Mr. G. A. Garry Simpson showed a case of Chloasma affecting the Neck.

THERAPEUTICAL SOCIETY.—A meeting of this society was held at the Apothecaries Hall, London, on April 19th, Dr. C. Cooper being in the chair.—Dr Herbert S. French read a paper on Some Experiments upon Drugs which are said to Increase the number of Leucocytes in the Blood. After describing the views of Metchnikoff and Ehrlich and Walker's experiments he said that he had found the leucocytes in his own blood amounted to 13,000 per cubic millimetre. He took nuclein by the mouth and hypodermically in increasing doses but he never found more than 13,125 leucocytes to the cubic millimetre of his blood. Then hypodermic injections of sodium cinnamate were tried but no increase of leucocytes occurred, and, lastly, collargol was injected in increasing doses. This raised the leucocytes to 22,187 per cubic millimetre, but caused fever, headache, and depression.—A note from Dr. T. B. Belgrave of Australia, a corresponding Fellow, was read inclosing the translation of a letter from Dr. Hahl, Imperial Governor, German West Guinea, stating that no parasite of a mosquito had been found there, but Dr. Dempwolff, the leader of one of the malaria expeditions, stated that a species of notonecta found in the pools devoured the larvæ of the anopheles and he suggested that the notonecta should be bred where malaria existed.—A paper from Mr. J. Maiden, director of the Botanical Gardens at Sydney, a corresponding Fellow of the society, was next read by the Secretary. The subject of the paper was Plants which Induce Eczema, the following being enumerated and instances of the irritation which they caused being given: (1) Phlebolium argenteum (rutaceæ) called blister plant; (2) and (3) (meliaceæ) dysoxylon Richii and dysoxylon Muelleri (red bean); (4), (5), and (6) (anacuardiaceæ) rhus radicans (the poison ivy), rhus diversiloba (the poison oak), and rhus vernix (the poison sumach or poison elder); (7) (leguminosæ) castanospermum Australe (the black bean); (8) and (9) (myrtaceæ) eucalyptus maculatus (spotted gum), and eucalyptus hemiphloia; (10) cassania aculeata (dogwood); (11) (compositæ) pyrethrum parthenium (feverfew); (12) and (13) (primulaceæ) primula obconica and primula sinensis; (14) and (15) (euphorbiaceæ) excœcaria agallocha and excœcaria parviflora; (16) (coniferæ) thuja Douglasii; (17) (liliaceæ) hyacinthus orientalis; and (18) (aroideæ) richardia Æthiopica (the arum lily). All these excited irritation of the skin by contact and some, such as the rhus and eucalyptus, even by proximity.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on April 22nd, Dr. Leslie Durno, the President, being in the chair.—Dr. J. S. Risien Russell read a paper on the Diagnosis and Treatment of Tumours of the Spinal Cord in which he laid stress on the fact that in their earlier stages cases of the kind were frequently mistaken for neurasthenia and hysteria. He quoted examples of this and pointed out what physical signs were present in the cases which were not in accord with the diagnosis of a functional affection and which of them made compression of the cord the most likely organic lesion present. Lumbago and sciatica were also often diagnosed in these cases and sometimes the pains were mistaken for those of tabes. It was not always easy to distinguish cases of syphilitic meningo-myelitis except when there were signs of concomitant syphilitic affection of intracranial structures, although the results of treatment might help to decide the question. Another disease that sometimes caused difficulty was subacute combined degeneration of the spinal cord, in which, however, pain did not antedate the motor and sensory paralysis in the way that it usually did

in extramedullary tumours, while evidence of upward extension of the mischief might further prove of assistance in the diagnosis. Intramedullary tumours might readily be mistaken for syringomyelia, as in a case which he quoted, but trophic lesions of the skin, nystagmus, and curvature of the spine were absent. The differential diagnosis between intra- and extra-medullary tumours was most important, because while nothing could be done for the former the latter allowed of some of the most brilliant achievements of modern surgery. When there was good reason to suspect gumma mercury and iodide of potassium should be tried, but valuable time ought not to be lost when there were signs of progressive destruction of the spinal cord. In any case in which a non-syphilitic tumour was diagnosed and localised it should be removed with as little delay as possible unless the cord had already been destroyed beyond hope of repair.

PATHOLOGICAL SOCIETY OF MANCHESTER.—A meeting of this society was held on April 20th, Dr. E. S. Reynolds, the President, being in the chair.—Dr. Nathan Raw made a communication on the Method of Infection of the Human Body by the Tubercle Bacillus and exhibited several specimens illustrating such invasions. He was of opinion that human and bovine tuberculosis were distinct varieties of the same disease and that the bacilli were culturally and morphologically different. Abdominal tuberculosis in children, together with enlarged glands and strumous joints, he considered were in reality bovine tuberculosis conveyed to the alimentary canal by tuberculous milk. He was also of opinion that acute miliary tuberculosis was generally bovine in origin and was not true human tuberculosis. He believed that the human body was attacked by two distinct varieties of tuberculosis.—Mr. W. P. Montgomery read notes of a case of Excision of a Congenital Dilatation of the Sigmoid Colon and showed the specimen.—Mr. F. A. Southam made some remarks on a series of 120 operations for the Removal of Vesical Calculi and showed the specimens which included examples of encysted calculi, spontaneous fracture, calculi containing foreign bodies as their nuclei, and so on. In 49 cases the calculi had been removed by lithotrity, 14 of the patients being boys under ten years of age. In 63 cases lithotomy had been performed, the lateral operation in 17 patients and the suprapubic in 46 patients. In ten cases there was a recurrence after operation—viz., in five patients after lithotrity and in five patients after lithotomy. No instance of recurrence was met with in children or in adults under 50 years of age.—Other preparations were shown as card specimens.

GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.—A meeting of this society was held on April 11th, Mr. A. E. Maylard, the President, being in the chair.—Dr. G. B. Buchanan showed as a fresh specimen a Segment of Bowel with a Meckel's Diverticulum excised for the relief of obstruction. The tip of the diverticulum was not attached, nevertheless it and its mesentery had become twisted in such a manner as to produce a gradual strangulation of the bowel.—Mr. J. R. Riddell showed several cases of Rodent Ulcer, Lupus, &c., treated by the x rays and other electro-therapeutic means. Several of the cases were previously shown to the society in February, 1903. The results of the treatment had been most satisfactory.—Dr. A. N. McGregor and Dr. R. Ramsey gave a demonstration and read notes of experiments undertaken to determine the relative efficiency of some surgical dressing materials as absorbents of the discharges from wounds. The most efficient was found to be a cylinder of wood-wool and next to it was lint. The favourite packing (iodoform gauze) was found relatively very inefficient; some samples, indeed, were almost water-proof.—Dr. W. W. Christie (for Mr. J. Walker Downie) read notes of two recent cases of Crico-thyrotomy for the Removal of Intralaryngeal New Growths. Dr. A. R. Ferguson showed microscopical sections of the tissues removed and read a pathological report upon them.

WIGAN MEDICAL SOCIETY.—An ordinary meeting of this society was held on April 14th.—Mr. W. Mitchell Roocroft, who was in the chair, showed a patient (male), aged 45 years, on whom he had performed Gastro-jejunostomy for Cancer of the Stomach and adjacent organs three months previously. The patient recovered and had increased considerably in weight.—Mr. Roocroft afterwards gave his presidential address on Ankylostomiasis which was attentively listened to and much interest was evinced in the subject.

Reviews and Notices of Books.

A Text-book on the Practice of Medicine. By JAMES M. ANDERS, M.D., Ph.D., LL.D., Professor of Medicine and Clinical Medicine at the Medico-Chirurgical College, Philadelphia; Physician to the Medico-Chirurgical Hospital. Illustrated. Sixth edition. London, Philadelphia, and New York: W. B. Saunders and Co. 1903. Pp. 1275. Price 24*s.*

IT must be a source of gratification to Professor Anders that although the fifth edition of this work, of which two large reprints were made, was issued only two years ago yet another edition has now been found necessary. The practical applications of the results of experimental medicine to the diagnosis and the treatment of disease have been again made the feature of the work. The general plan and principles of classification adopted in the previous editions have been preserved, although the subject matter has been thoroughly scrutinised and carefully revised. In our notice of a previous edition we commented favourably on the use which was made of tabular presentations of points in differential diagnosis and this plan has been retained. Those subjects which have recently attracted considerable attention, such as the mosquito-borne diseases (malaria and yellow fever), bacillary dysentery, cholecystitis and the use of the x rays in the diagnosis and treatment of disease, have all received a due share of attention. Brief descriptions have also been introduced of certain conditions which were not included in previous editions. Paratyphoid fever is noticed, this term being applied to a group of affections that closely simulate typhoid fever clinically but are due to an essentially different microbic cause; there is also an absence of intestinal ulceration; the condition which has been termed the "fourth disease" is also mentioned. The subject of trypanosomiasis only receives brief attention, the report of the Commission of the Royal Society not having been issued when this edition was in preparation. Attention is also directed to a rare form of aphasia—transcortical or conduction aphasia—originally supposed to be due to a lesion in the fibres uniting the centres of audition and motor speech. Examination has shown, however, that the lesions are of the most various description. A short account is given of adiposis dolorosa, a condition in which masses of fat are deposited irregularly in the subcutaneous tissues of the body with tenderness and spontaneous pain in these masses and derangement of the menstrual functions. A few remarks are devoted to a peculiar disease of the central nervous system termed amaurotic family idiocy. It is characterised by the occurrence, a few months or a few years after birth, of marked impairment of intelligence and gradually progressive loss of vision. The pathology of the disease is not known. We are informed in the preface that the changes and additions in the section devoted to diseases of the nervous system are from the pen of Dr. Joseph Sailer.

From the point of view of the medical practitioner this work is a most useful one. It is essentially a text-book on clinical medicine and as such will be found valuable for purposes of reference.

The Law relating to Pauper Lunatics. By SYDNEY DAVEY, B.A., LL.D., Barrister-at-Law. London: The Poor-law Publications Co. 1903. Pp. 177. Price 5*s.* 6*d.*

LIKE most of the manuals of lunacy practice this book consists of extracts from various statutes relating to insanity with explanatory notes and cross references. Inasmuch as it deals almost exclusively with pauper lunatics the reader interested in this class can find what he wants without being

overwhelmed by "the literature of the subject" as contained within the covers of the unwieldy treatises of Archbold or Renton. Moreover, the work under review is up to date and fortified by recent decisions in the courts and as its author is a gentleman of considerable experience in matters relating to the Poor-law it may be safely recommended to the notice of boards of guardians and their officers, medical or other. It must be remembered, however, that Mr. Davey writes as a lawyer, not as one actually concerned in applying the provisions of the Lunacy Acts to the cases of insanity that the medical man meets with in practice, and consequently, although his opinions are perfectly sound, they are not necessarily always to be followed strictly. Thus in dealing with the definition of the term "pauper" as implied in Section 18 he inclines to the view that the words "in such circumstances as to require relief for his proper care" bring the case within Section 13. He is quite possibly right but Section 14 is the one which the Commissioners in Lunacy regard as the proper one and Section 20 is the one which relieving officers employ. It is a distinct convenience to regard the transfer to a workhouse and the reception there under the last-mentioned section as equivalent to relief and until the courts decide otherwise we see no reason for adopting the suggestion that such a construction is fallacious. Similarly, in spite of the opinion given by the Law Officers of the Crown in January, 1901, justices often adhere to the procedure formerly in vogue in dealing with cases under Section 20 instead of following the more orthodox route which requires the workhouse medical officer to assume the responsibility of detaining the alleged lunatic under Section 24.

There are one or two points concerning the duties of medical men upon which we have sought information in vain. For example, it is not explained what is to be done if the workhouse medical officer, acting under Section 24 (i.), does not see eye to eye with the workhouse master acting under Section 20 as to what constitutes proper accommodation in the workhouse.

A section deals with soldiers, seamen, and marines who become insane. The Army Act, 1881, which is as far back as Mr. Davey goes, was not retrospective and there are still military lunatics who do not fall within its provisions. A note dealing with these might be added to a future edition. The portion of the book concerned with the maintenance of paupers in asylums is commendably full and should prove very useful. Altogether the work is an excellent one and Mr. Davey has dealt with a complex and difficult subject in a manner which is, on the whole, quite satisfactory.

A System of Physiologic Therapeutics. Edited by SOLOMON SOLIS COHEN, A.M., M.D., Senior Assistant Professor of Clinical Medicine in Jefferson Medical College; Physician to the Jefferson Medical College Hospital. Vol. VIII: Rest, Mental Therapeutics, Suggestion, by FRANCIS X. DERCUM, M.D., Ph.D., Professor of Nervous and Mental Diseases in the Jefferson Medical College of Philadelphia; Neurologist to the Philadelphia Hospital. London: Rebman. 1903. Pp. 332. Price 12*s.* 6*d.*

THE nature and scope of this system of therapeutics are well known to our readers, reviews of previous volumes having appeared in our columns. The subjects discussed in the present volume are for the most part not to be found in the ordinary text-books but are, nevertheless, of great interest. Rest is of the utmost importance in treating certain diseases of the central nervous system, more particularly those which have a functional origin. Professor Dercum has succeeded in presenting the subject in a systematic manner. Simple physiological truths and clinical facts have so far as possible been placed side by side together with logical deductions in regard to treatment.

The first condition described is neurasthenia or, as Professor Dercum prefers to term it, "fatigue neurosis." This disease is a common one but the principles which guide its treatment are not always fully understood. A graphic description is given of its clinical features and then the application of rest as a therapeutic measure receives full consideration. The management of the diet in these cases requires close supervision and Professor Dercum gives full directions as to the nature and quantity of food which is required. It is rightly insisted on that the closest possible attention must be given to the execution of details when a "rest cure" is being carried out lest the whole purpose of the treatment should be defeated by some apparently trivial neglect.

A very good account is given of hysteria. Professor Dercum points out that hysteria is a genuine affection, the symptoms of which are in no sense assumed. The manifestations which are observed, though presenting great individual variability, consist of sensory, motor, psychic, and visceral phenomena so definite in character that taken together they constitute a distinct, well-outlined clinical whole. The method of treating the disease by means of rest is clearly and minutely explained and especial emphasis is laid on the difficulty which is frequently experienced in dealing with the visceral symptoms of hysteria, anorexia nervosa more particularly often proving a great obstacle to recovery.

The second part of the volume deals with the Therapeutics of Mental Disease. It is divided into two chapters, the first containing a consideration of the prevention of insanity and the general principles of the treatment of the insane and the second giving many useful hints as to the treatment of the special forms of mental disease, including drug habits and the insanities of intoxication.

The third and last part of the work contains some very sensible remarks on Suggestion. Professor Dercum points out that much unnecessary mystery attaches to this term. Unfortunately it has been associated very closely with hypnotism and has acquired an almost specific meaning. To make a suggestion, however, does not mean to impose a hallucination or a delusion upon a person in the condition of hypnotic sleep, but merely to convey to, or to arouse in, the mind of another some thought or idea in an unobtrusive manner. Physicians employ suggestion habitually, though most frequently they do so unintentionally and unconsciously. That it often powerfully affects the progress of a case, for good or for ill, must be admitted. It is rarely, of course, that suggestion alone is relied on; it is commonly as an adjuvant to treatment by other means that it proves of value.

Professor Dercum discusses the subject of hypnotism in an able and judicial manner and comes to the conclusion that it is only applicable as a method of treatment to an exceedingly limited number of cases.

This volume is well worthy of perusal and we can commend it to the notice of our readers.

The Eye, its Refraction and Diseases. By EDWARD E. GIBBONS, M.D., Assistant Surgeon of the Presbyterian Eye, Ear and Throat Hospital. New York: The Macmillan Company. London: Macmillan and Co., Limited. 1904. Pp. 472, small 4to. Price 21*s.* net.

ALTHOUGH the title of this work implies that the diseases of the eye will be described the author confines himself almost completely to the consideration of the physics and physiology of the eye. The reader will not find any account of the numerous inflammatory affections of the different tunics of the eye which occupy so large a space in all modern text-books, or of the diseases of the lids or lacrymal apparatus, or of cataract and the operations that have been devised for its removal, but upon the other hand he will obtain by a perusal of the 28 chapters into which it is divided an exceptionally full and complete knowledge of those facts

which are partly based on theory and partly rest on experiment and which have of late years so wonderfully increased the interest that has always been felt in the functions of this organ. It is curious to notice that only half a century ago many of the headings of the chapters would have conveyed but little meaning even to those who were most familiar with the anatomy, physiology, and pathology of the eye. Such terms as retinoscopy, ophthalmoscopy, ophthalmometry, optometers, prismoptometry, astigmatism, visual acuity, and others indicate the new ground that has been broken and the immense strides that have been taken since the introduction of the ophthalmoscope.

The essential feature of the book is the very complete account that is given of the numerous instruments devised of late years for testing the different functions of the eye, including distance, colour, field of vision, motility, and refraction, and the examination of the tunics and media. Thus in regard to ophthalmoscopy alone four forms of ophthalmoscope employed by Loring as well as others by Knauer, Payne, and Roth are described and illustrated. The appearances presented by the retina and the choroid in health and in some forms of disease are described briefly but clearly. It need hardly be added that the details of the course pursued by rays of light in refraction by lenses and reflection by mirrors and the mode of production of the ophthalmoscopic image are given in full.

In discussing the cause of the light streak seen with the ophthalmoscope on the surface of the vessels the author remarks that it is a reflex streak formed by the reflection of light from the anterior convex surface of the column of blood within the vessels; at the same time he gives the opinions of Loring and Noyes that it is due to the light being condensed in passing through the column of blood in them and then reflected back by the subjacent tissue and the view taken by others that it is due to different causes in the arteries and veins—in the veins resulting from a reflection from the surface of the column of blood within them, whilst in the arteries it proceeds from the axial part of the blood stream.

Many forms of perimeters are given and the examination of the field of vision naturally leads to the consideration of the nature and varieties of scotomata, with the conclusions that may be drawn from their number, form, extent, and position and the inferences deducible in regard to the situation of the lesion of the optic nerve, chiasm of the tract, or primary optic centres.

More space is devoted to the consideration of prisms and lenses than is to be found in modern ophthalmological works. An account is given of Dr. Williams's lantern for testing the colour sense of those employed in signalling either on land or sea. The best chapter in the book is probably that devoted to astigmatism. The numerous arrangements of dials, letters, discs, and lines for its discovery are described and illustrated, and in addition drawings are given of Ridgeway's chromatic test for astigmatism and of Holtz's astigmometer. The thoroughness with which the formulæ used in optics are given renders this book a valuable accompaniment to any of the larger ophthalmological treatises. The reader will find a full account of the theory of Gauss and the principles involved in the schematic eyes of Donders, Listing, and Helmholtz We can recommend the work to all those who are devoting themselves to the study of the diseases of the eye.

A Manual of Medical Jurisprudence for India. By Lieutenant-Colonel J. B. GIBBONS, I.M.S. Calcutta: G. W. Allen and Co. 1904. Pp. 475. Price Rs. 12 8.

THE officers of the Indian Medical Service can to-day rely on several works on medical jurisprudence. They can consult in addition to the old but valuable treatise by Chevers the more recent works by Lyons and Barry. The latest published volume on the subject is the one now under review. The author is eminently qualified as an exponent of the subject, having been formerly police and coroner's surgeon at Calcutta and professor of medical jurisprudence at the medical college in that city. He has embodied in these pages the experience derived from eight years' service in the former office. As the result of his own personal work and of the study of the standard works on medical jurisprudence at home and abroad, Lieutenant-Colonel Gibbons has in this volume given us a worthy addition to the above existing standard works.

In his introduction the author traces briefly the successive steps by which medical jurisprudence has attained its present importance. The questions connected with medical evidence are then lucidly considered and amply set forth by various illustrations and the chapter concludes by directing attention to the facts in connexion with the drawing up of medico-legal reports. After this introduction the author enters first on the subjects in relation with death, such as its modes, its signs, the characters of the post-mortem stains, and rigor mortis. It is pointed out that whereas cardio-respiratory inhibition may simulate death yet that this condition can only last a very few minutes. According to the author's experience, the body becomes cold in India in less time than in England. The onset of rigor mortis also comes on more quickly. The importance medico legally of the curious phenomenon of cadaveric spasm is insisted upon. The chapter on Putrefaction is very complete; attention is here drawn to the manner in which flies, ants, jackals, rats, and fishes mutilate the dead body; it is pointed out how in India very great variation occurs in the rate of progress and in the appearances produced in the process. Lieutenant-Colonel Gibbons mentions in this chapter the important fact that in natives the presence of food in the stomach does not justify the opinion that the patient died within six hours of taking his last meal.

The matters to be noted in the examination of the dead body come next. The author does not agree with the oft-mentioned statements in medico-legal works concerning the retention by the face of the expression which it held at the time of death. He also notes the advanced state of putrefaction that so commonly has occurred before the body has been brought into the post mortem room to be examined. In our experience this has happened in India oftener than not. A very complete description is given of the method to be followed in the making of the post-mortem examination. In the chapter on Identification, besides the signs generally described in medico-legal works, attention is drawn to those due to the religious and caste customs of the people, such as are manifested by the ears and the nose, the fastening of the coat, and the course of the sacred thread. The symptoms and the post-mortem appearances of asphyxia are then detailed and the form of capillary hæmorrhages occurring along the posterior surface of the thoracic aorta, described by Kratter as being of considerable value in this respect, is noted. The three ways of producing asphyxia—by hanging, strangulation, and throttling—are then studied in considerable detail Thus, in asphyxia from hanging we find that the cause of loss of consciousness is discussed and attention is directed to the fact that it is due to the compression of the carotid arteries and pneumogastric nerve; the post-mortem signs, and especially those due to the mark of the rope, are detailed. As regards the diagnosis of death by hanging it is pointed out with respect to the noose mark that Casper's conclusions also hold good for India, inasmuch as no difference can be detected between the mark caused by suicidal hanging and that produced by a noose applied after death. The author here points out that in a case of alleged hanging it is well to recollect that the tissues of the neck show no sign of injury, as a rule, in cases of suicide and therefore that where injuries are found close scrutiny should be made. After death by hanging that

occurring from strangulation and throttling is next fully discussed; the latter in India is a common mode of homicide and in the signs detailed attention is drawn to the fact that the crescentic cuts produced by the nails are not often seen in India where the custom of keeping the nails short is general. The chapter on Drowning is very complete; the post-mortem appearances are well described and here the author points out that the presence of fine lathery froth about the nose and mouth is not peculiar to death by drowning; Lieutenant-Colonel Gibbons has many times seen it in cases of opium poisoning. As regards the period during which the body will rise to the surface and float after death the author states that in his experience this will be in or within 24 hours in the hot weather and in from one to two days in the cold.

Mechanical Wounds and Injuries next claim the reader's attention. These are discussed generally and also with respect to the different parts of the body concerned, such as the skull, the spine, the neck, the chest, the abdomen, and the extremities. The important subject of Rupture of the Spleen is fully considered. We then come to the subject of Fatal Injuries; here much useful information can be found with regard to the proper answering of questions that may be put to the medical witness in court. Burns and scalds and cognate conditions are described and the reader of this work in Europe may be surprised to find the subject of Death from Cold entered into; however, should he ever visit the Punjab in the winter months he will know what cold is during the early hours of the day.

The next section is an important one on Poisoning. How important it is for the medical man can be appreciated by him when he learns that "murder by poisoning in India is three times as prevalent and suicide by poisoning many times more prevalent than in England." It is probable that murder by poisoning also is much more common in India than the recorded cases indicate. The chemical examiner to the Bengal Government at the Indian Medical Congress in 1895 clearly showed the necessity for an Act to restrict the sale of poisons and more especially of arsenic which appears to be *the* homicidal poison. The diagnosis of poisoning, the evidence of poisoning in the dead body, and the precautions to be taken in the post-mortem examination are fully stated, and the various poisons are considered.

The question of sex in all its relations and of sexual crimes is then considered and the work concludes with the subjects of Pregnancy, Infanticide, and Insanity. The author is to be congratulated on having produced an excellent treatise.

Biographic Clinics. Vol. II.: The Origin of the Ill-health of George Eliot, George Henry Lewes, Wagner, Parkman, Jane Welch Carlyle, Spencer, Whittier, Margaret Fuller Ossoli, and Nietzsche. By GEORGE M. GOULD, M.D. London: Rebman, Limited. 1904. Pp. xi.-392. Price 5*s*.

THE present work by Dr. Gould consists of a republication of single papers or essays, one of which, the paper on the ill-health of Wagner, originally appeared in our own columns, and may be described as an additional attempt to convert the medical profession to a belief in the author's favourite doctrine that migraine in general, as well as a large number of the maladies which afflicted the eminent persons of whom he writes, may be attributed to undetected astigmatism or to other irregular forms of ametropia and were or would be curable by the employment of proper spectacles. Dr. Gould is no doubt entirely convinced of the correctness of his assertions and he is indignant both with reviewers who have accused him of exaggeration and with those who, as he conceives, have not taken sufficient heed of his earlier publications. But even reviewers, it may be pleaded, are subject to the limitations imposed by space and time; and should not be too hardly dealt with if they are sometimes more chary of expending these than the authors with whose works they deal may consider to be fitting or necessary. The weak point of Dr. Gould's case is that some of the sufferers of whom he writes died before astigmatism was commonly recognised even by ophthalmic surgeons, and that his opinion of the causes of their ailments cannot now be regarded as other than conjectural, while with regard to some of those who died more recently the evidence actually available can scarcely be said to confirm his views. In the case of Parkman, for example, Dr. Gould represents him as having entirely neglected study while at Harvard but does not explain how it happened that at the age of 21 years he graduated there with high rank; and in the case of Nietzsche he would have us believe that an astigmatism sufficient to produce serious symptoms was overlooked so lately as in 1899 or 1900 (the dates are somewhat vague) by no less an authority than Professor Alfred Graefe of Halle. As a matter of fact, indeed, it is an essential part of Dr. Gould's argument that English and German "oculists," as he calls them, habitually ignore or neglect not only astigmatism but also, generally speaking, all defects or inequalities of refraction which are slight or moderate in degree and which, he contends, are more frequently productive of serious symptoms than higher grades of the same conditions This latter conclusion appears to us to be contrary both to common sense and to experience; and the suggestion that ocular defects can only be recognised and dealt with in America is one that seems hardly to call for serious consideration.

It is, of course, perfectly well known that errors and inequalities of refraction are liable to produce headaches and other discomforts, including incapacity for sustained near work, but we think it is impossible to assign to these causes more than a very small part of the influence which Dr. Gould claims for them. He tells us that "the doing something while sitting means 'eyestrain' in *at least 25 per cent. of the doers*," and a few sentences before that the effects of "eyestrain" may be "awful," the "rights of the irritated brain being ruthlessly trampled upon by the most cruel overuse and abuse." With great submission to an American experience which is repeatedly described as covering "thousands" and sometimes "millions" of cases of this kind, we feel bound to say that, tested by the opportunities of this country, such assertions not only exaggerate the facts, but carry exaggeration to a limit at which it is either rendered harmless by its absurdity or is even calculated to produce a reaction possibly tending towards neglect. The one possible use of Dr. Gould's book will be to render ophthalmic surgeons careful to afford no justification for his strictures, and to increase the care of physicians in requiring complete investigation of the refraction of neurotic patients; but it is not likely, we think, to make many converts to his views. Among other grievous faults it is disfigured by an almost ferocious violence of language such as should have no place in a scientific discussion. The action or alleged inaction of "German and English oculists" is repeatedly described as "criminal," and Dr. Gould is not content with his endeavours to explain all Mrs. Carlyle's troubles by astigmatism but quite superfluously engages in the unsavoury contest which has recently raged over her life and correspondence and brings to it such words and sentences as "asinine," "atrocity," the "loathsome and infamous deed of a cowardly bungler," and so on *ad nauseam*. He has yet to learn that unmeasured language adds no force to argument and that mere abuse is eminently distasteful to gentlemen.

LIBRARY TABLE.

Martin's Up-to-date Tables of Imperial, Metric, Indian, and Colonial Weights and Measures. Compiled and written by ALFRED J. MARTIN, Fellow of the Surveyors' Institution, England. 1904. Pp. 255. Price 2*s.* 6*d.* *Martin's Up-to-date Beginners' Table-book.* Pp. 48. Price 1*d.* London: T. Fisher Unwin.—The main object of the larger book of tables seems to be to encourage by comparison and argument the use of the decimal metric system of weights and measures and is more likely to appeal to adults with matured judgment than to school children. The two books are certainly full of useful tables and information of a kind that it is often difficult to get hold of quickly when wanted but there are a few things that require correction. In the penny introductory book, which is stated on the cover to be "for schools and home teaching," we think that it would have been better to omit the arguments in favour of the metric system and we hardly think that the pupil should be told that "all weights and measures not appearing in the following tables are purposely omitted to prevent a pupil's mind from being crammed with a lot of nonsense," and that "it is not only waste of time but harmful to teach *obsolete* tables of bread, butter, coal, wood, &c., put in most table-books." If a master is bound to teach these tables it might lead to rebellion and argument on the part of the pupil and to subversion of discipline. The rule for changing a recurring decimal fraction to a vulgar fraction given on p. 21 of the little book is not clear to us and we think that the terms "numerator" and "denominator" have become mixed. In the large book under "Measures of Temperature" the name of Celsius has been printed "Celius." One of the formulæ for converting degrees of temperature from one scale to another is given as $R=\frac{4(F-32)}{8}$. Here 8 has evidently been printed in mistake for 9. It is interesting in this connexion to note that the second reading of the Weights and Measures (Metric System) Bill was moved by Lord Belhaven in the House of Lords on Feb. 23rd. The object of the Bill is to render compulsory the use of the metric system of weights and measures in this country. This Bill was supported by Lord Kelvin who contended that the decimal system worked out by the French philosophers originated in England. In a letter dated Nov. 14th, 1783, James Watt laid down a plan which was in all respects the system adopted by the French philosophers seven years later. A writer in the *Daily News* of March 10th, 1904, claims that an Englishman, Sir John Riggs Miller, M.P., largely influenced the French in 1790 in starting the practical adoption of the metric system in France. Lord Belhaven stated that the adoption of the metric system would be of great advantage to our export trade. This was especially the case with the drug trade. It was given in evidence before the committee of 1895 that at the beginning of the nineteenth century the drug trade of the world was confined to London; at the end of the century London still retained 70 per cent. of this trade but was now fast losing the command, many of the drugs being sent to Amsterdam and Havre because people did not like to weigh and to pay for them by English measures. The South American Republics now went to Paris for their drugs because the metric system was used there. The Marquess of Lansdowne instanced the danger of getting English medical prescriptions made up on the continent, some pills being made for a friend of his as large as marbles in consequence of the ignorance of the druggist's assistant of English weights and measures. On April 15th, Mr. Bousfield, M.P. for North Hackney, moved the second reading of his Weights and Measures Bill in the House of Commons and tried unsuccessfully to introduce an instalment of the metric system and to abolish troy weight and apothecaries' weight. Particulars of this Bill will be found in THE LANCET of April 23rd, p. 1169, under "Parliamentary Intelligence." At p. 154 of his tables Mr. Martin gives a list of proposed reforms, one being the abolition of the old apothecaries' weight, and after two years the discontinuance of avoirdupois denominations in the Pharmacopœia and the issue of metric weights and measures to medical men, druggists, and others. Another reform proposed is the abolition of the apothecaries' fluid measures. The metric system of weights and measures is very useful and simple for many purposes but we have known well-educated people who have studied decimals say after doing a sum, "Yes, the figures are all there, but where am I to put the dot?" If the dot is put in the wrong place in medical prescriptions it may lead to serious trouble. To some minds the Latin and Greek prefixes of milli-, centi-, deci-, deka-, hekto-, kilo-, are confusing but these terms need not always be adopted. The duodecimal opponents of the decimal system complain that ten is not divisible by three without a remainder. This is particularly brought home where three articles are sold for 25 centimes, and a person only wants to buy one or two. We have observed that those Englishmen who have become thoroughly acquainted with the metric system of money and measures abroad are in favour of its adoption at home. Those who have not had that experience rather dread the innovation because it will give them a lot of trouble to learn new tables although they are willing to admit the advantages of the decimal system. In the engineering, electrical, and other technical trades and scientific circles in this country decimal metric weights and measurements are used every day and have become almost indispensable. The fact that the decimal metric system has become so extensively used by all the highly civilised nations with the exception of Russia and Great Britain is a very powerful argument in its favour. We feel that if the weights and measures of the decimal metric system are made compulsory in this country a decimal system of coinage must be adopted simultaneously. Otherwise the full advantages of the system will not be apparent and there might even be confusion in trades dealing in dozens and grosses at certain prices.

JOURNALS AND MAGAZINES.

The Journal of Anatomy and Physiology. Conducted by Sir WILLIAM TURNER, K.C.B., F.R.S., D. J. CUNNINGHAM, F.R.S., G. S. HUNTINGTON, M.D., A. MACALISTER, F.R.S., and J. G. M'KENDRICK, F.R.S. Vol. XXXVIII., Part III. April, 1904. London: Charles Griffin and Co., Limited. Price 6*s.*—The contents of this number of the journal are: 1. A Study of the Astragalus, by R. B. Seymour Sewell, B.A., with four plates. Mr. Sewell has examined and compared upwards of 1000 specimens of this bone obtained from the tombs of the predynastic Nagadah race and from the tombs of Egyptians, the dates of which range from the fifth dynasty to the Ptolemaic and Roman periods. He obtained a length-breadth index by dividing the greatest breadth + 100 by the greatest length; the average was found to be 78 but there were considerable variations. Diagrams show the different types of curvature in the trochlear facet. 2. Observations on Traction Epiphyses, by F. G. Parsons, F.R.C.S. Eng., with 13 illustrations. 3. John Grattan's Craniometer and Craniometric Methods, by Johnson Symington, M.D. Edin., with two plates. 4. On the Presence and Significance of the Superior Commissure throughout the Vertebrata, by John Cameron, M.B. Edin., with two plates. Dr. Cameron finds the superior commissure a constant and well-marked structure in birds, the fibres arising from the cells of the ganglia habenulæ and decussating. In the adult human brain one lateral half of the pineal gland is supplied by fibres from the ganglion habenulæ of the opposite side.

Hence the human pineal gland is probably a bilaterally developed structure possessing a bilateral nerve supply. 5. A Method of Demonstrating Tracings to Large Audiences, by Walter Colquhoun, M.B. Glasg. 6. A Comparative Study of the Grey and White Matter of the Motor-cell Groups and of the Spinal Accessory Nerve in the Spinal Cord of the Porpoise (Phocæna communis), with five plates, by David Hepburn, M.D. Edin., and David Waterston, M.D. Edin. 7. Observations upon the Distribution and Structure of Hæmolymph Glands in Mammalia and Aves, including a Preliminary Note on Thymus, by Thomas Lewis. 8 Lectures on the Early Stages in the Development of Mammalian Ova and on the Differentiation of the Placenta in Different Groups of Mammals, by Arthur Robinson, M.D. Edin., with two plates. 9. The Germ Cells, Part I. continued, by John Beard, D.Sc.; Sect. xiv., Primary and Secondary Germ Cells.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., W. F. R. WELDON, F.R.S., and SYDNEY J. HICKSON, F.R.S. With Lithographic Plates and Engravings on Wood. London: J. and A. Churchill. New Series, No. 188. 1904. Pp. 145. Price 10s.—This number contains the following memoirs: 1. Edwin S. Goodrich, M.A., on the Dermal Fin Rays of Fishes, Living and Extinct, with seven plates. Mr. Goodrich finds that in all the fins of true pisces there are present dermal rays of mesoblastic origin, the dermotrichiæ. In the elasmobranchii and holocephali and probably also in the acanthodii and ichthyotomi these rays are unjointed, occasionally branched and composed of a fibrous substance of horny consistence without bone cells. These he proposes to term ceratotrichia. All living teleostomes are provided with small horny unjointed rays at the edge of their fins to which the name actinotrichia has been given. The teleostomes are further provided with jointed and branched bony dermal rays developed outside the actinotrichia. They closely resemble the body scales, from which they are probably derived, and Mr. Sedgwick proposes to call them lepidotrichia. In the dipnoi (lepidosiren, protopterus, and ceratodus) are found jointed dermal rays of bony substance containing bone cells. To these the name of camptotrichia is provisionally given. The camptotrichia of the dipnoi represent the lepidotrichia of the teleostomes and the lepidotrichia are probably derived from modified scales. 2. E. Ray Lankester, F.R.S.: The Structure and Classification of the Arthropoda. This memoir is a reprint of the articles Arthropoda and Arachnida, which were published four years ago in the widely advertised tenth edition of the Encyclopædia Britannica but which Mr. Lankester complains have been overlooked by recent writers. 3. Professor Marcus Hartog: Some Problems of Reproduction. The first part of this article is occupied with the subject of multiple fission and embryonic enzymes; the second is an essay on fertilisation, in which the author gives a very interesting account of recent views of the nature of this process.

Looking Back.

FROM

THE LANCET, *SATURDAY*, April 29, 1826.

REVIEW.[1]

Transactions of the Medical and Physical Society of Calcutta. Volume the First. 8vo. pp. 406. Thacker, Calcutta, and Parbury and Co., London, 1825.

To the oriental nations we owe the introduction of many simples into medicine, which were unknown to the Greeks and Romans, such as manna, senna, tamarinds, and rhubarb, besides musk, nutmegs, cloves, &c.; and in modern times, the mandar, croton oil, &c. Hence it is not improbable, that many valuable remedies may yet be culled from the Materia Medica of the East; but if no accessions of value be derivable from that source, a vast store of knowledge, important equally to physiology and pathology, may be collected and rendered subservient to the healing art. That much may be done, is proved by the present volume of transactions, which, although the Society has been so recently established, contains many papers of sterling value, of these we shall now proceed to give some account. The first is an elaborate dissertation on "*Kushta*, or Leprosy, as known to the Hindus," by H. H. Wilson, Esq. The author of the present paper first takes a general view of the Hindu notions of leprosy, rightly judging that they might form a serviceable and interesting introduction to future and more scientific inquiries. "The advanced state of medical knowledge in Europe," he remarks, "is a sufficient security that the errors of these guides, imperfect as they undoubtedly are, will not lead us astray, whilst, from their long experience and accumulated observation, it is possible that some hints may be derived, which may lead us to an improved knowledge and classification, if not to a more successful treatment of the disease." From the systems of Hindu medicine,* therefore, (and it appears they are never satisfied with less than a system,) the author proceeds to specify the causes, symptoms, prognosis, and diagnosis, classification, and treatment of leprosy, a disease (according to these authorities) of the constitution, first disorganizing the integuments, but proceeding to destroy the solid parts and dismember the body.

According to Hindu writers, the causes of leprosy are disorders of the primæ viæ, however induced; hereditary disposition; contagion, and "political or popular superstition." Under the first head they reckon the taking of things which do not assimilate, as milk and fish, and viscous and indigestible foods. Exposure to fatigue or heat, after a full meal. Drinking water or walking while heated. Excessive bodily exertion or mental excitement. The use of new rice, curds, fish, and of salt and acid viands; of pulse, radishes, sesamum, milk, and treacle. Also sexual intercourse, and sleeping under a loaded stomach.

They assert that the blood and serum are affected by the disease, and that it may be thus communicated to the fœtus in utero. They declare that it may be communicated by contact, by breathing the same air, by eating together, by sitting on the same seat, or by wearing the clothes and ornaments, or using the perfumes of an affected person.

Lastly, to abuse Brahmins, or to hold in contempt spiritual preceptors, with many similar offences are superstitiously supposed to generate this loathsome affection.

It is probable that in warm countries rancid foods, or proper ones if devoured in excessive quantities, may be causes of this disease. Dr. Henderson makes the former one of the causes of elephantiasis in Norway, and Good, unwholesome diet of the Spanish and Italian varieties of that disease. Dr. T. Heberden also states that in Madeira, fish, melons, cucumbers, young garden beans, or mulberries, taken at the same meal with butter, cheese, or any preparation of milk, are supposed to produce it, and are therefore religiously avoided. Upon the whole, there is not much of novelty in the first set of Hindu causes.

[1] Only a portion of this review has been transcribed. The whole occupies nearly eight pages of THE LANCET. 18 sorts of leprosy are enumerated in detail.

* The authorities which the author consulted, are the following:—The *Chikitsá*, or practical chapter of CHARAKA, which includes the *Nidan*, or pathology; the practical chapter of SUSRUTA; the *Chikitsa* and Nidan of BAGBHATTA; the Chikitsá of CHAKRADATTA and BANGA SENA; the *Nidan* of MADHAVA; the practical section of the *Rasa Ratnakar*, and the chapter of the *Bhâva Prazás*, which comprehends all the branches of the subject. The classification of CHARAKA and SUSRUTA is uniformly adhered to.

ELECTION TO THE COUNCIL OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.—A meeting of Fellows of the College practising in Birmingham and the Midland counties was held at the Medical Institute, Birmingham, on April 21st, Mr. Frank Marsh being in the chair. The following motion proposed by Mr. George Heaton, seconded by Mr. John W. Taylor, and supported by Mr. Jordan Lloyd and others was unanimously adopted:—

That this meeting of Fellows of the Royal College of Surgeons of England practising in Birmingham and the Midland counties is of opinion that the provincial Fellows are at present inadequately represented on the Council of the College and pledges itself to support the candidature of Mr. Gilbert Barling at the forthcoming election.

THE LANCET.

LONDON: SATURDAY, APRIL 30, 1904.

Small-pox and Vagrancy.

THE report of Mr. H. E. ARMSTRONG, medical officer of health of Newcastle-upon-Tyne, upon small-pox in relation to vagrancy is primarily a document issued for the information of the sanitary committee of the Newcastle corporation with reference to the dissemination of a particular disease by tramps. At the same time, however, its contents are fit matter for the consideration of all sanitary authorities throughout the United Kingdom and of the public whom it is their duty to safeguard, not merely because small-pox is a deadly and infectious disease but because all ought to realise that the tramp is a source of danger to the moral and the physical health of the community. In connexion with the present outbreak of small-pox and in order to ascertain the experience and the opinions of competent authorities upon its relation to vagrancy Mr. ARMSTRONG addressed a circular containing ten questions to the medical officers of health of 205 urban localities having populations of 20,000 and upwards. He has received and tabulated replies from 126 districts, 111 of which have suffered from small-pox during the recent epidemic, and of these 75 owed the introduction of the disease to tramps. This is a formidable proportion, whether we regard it as constituting over 50 per cent. of the districts returned as infected or as more than 25 per cent. of the whole. It is no trifling matter that one quarter of the principal cities, boroughs, and urban districts of England and Wales should have had to acknowledge the presence of small-pox with the expense and anxiety accompanying such a visitation and that this should be due to the insanitary and reckless habits of a worthless section of the community. The facts embodied in Mr. ARMSTRONG'S report and in similar collections of statistics surely should induce sanitary and other authorities to minimise the evil effects of the habits referred to and at the same time to lessen the evils inseparable from vagrancy by discouraging its existence. This can best and most justly be done by depriving it of its principal attractions. To wander at will without question and to be as dirty as he pleases are conditions of life essential to its enjoyment by the tramp; if they were made impossible for him he would almost cease to exist. Moreover, after living among vagrants in Germany, America, and England, Mr. FLYNT, the author of "Tramping with Tramps," declares that the British variety is far dirtier and more ragged than his Teutonic or his Transatlantic cousin. He appears also to be restrained less by law.

Among the questions asked by the medical officer of health of Newcastle-upon-Tyne which introduce or suggest the general topic of vagrancy is No. 7: "What means in relation to the spread of small-pox have you adopted to secure information as to vagrants visiting common lodging-houses? Have you put in force the provisions of Section 83 of the Public Health Act, 1875?" We find from the replies to this that in 56 out of 126 districts systematic inspection of common lodging-houses is relied upon and that in 37 only is Section 83 made use of. This provision of the Public Health Act is useful so far as it goes but its limited application is typical of our policy in such matters. It orders that the keeper of a common lodging-house in which beggars or vagrants are received shall from time to time make a report as to who has resorted to the house, with the reservation that this shall be done "if required in writing by the local authority." The discretion allowed to local bodies in such matters and the resulting variety in the methods adopted are shown from the answers to other questions besides the one referred to. Whether the tramp be regarded as a social or as a sanitary evil it seems highly desirable that a uniform manner of treating him should be obligatory throughout the kingdom. At present that locality profits the police and sanitary officers of which harass and restrain the wanderer, for it gets less than its share of vagrants and its laxer neighbours suffer in proportion to their laxity. The community at large, however, derives no benefit, for the attractions of vagrancy remain for those who know where to seek them. Other points with regard to which different practices prevail in different localities and to which Mr. ARMSTRONG'S report draws attention are the medical examination of tramps presenting themselves for admission to casual wards and the efforts made to impose revaccination upon them. Uniformity in the former case and the power to employ compulsion in the latter would seem to be desirable and just when we consider that these are persons who, whether they wander to seek work or in order to avoid the necessity of performing it, when they arrive in a district become a burden upon it with little prospect or with no intention of being anything else.

At the same time the problem of the vagrant is not one which can be dealt with easily or which can be solved by the enforcing of sanitary laws alone. The tramp is a moral and social evil as well as a danger to health. Drink has often been the original cause of his downfall and it remains as frequently a bar to his possible reformation. He may be vaccinated or cleansed when he patronises a casual ward and one of Mr. ARMSTRONG'S correspondents suggests that every common lodging-house should have a bath to be used compulsorily and an isolation room for suspicious cases of illness. For several months of the year, however, the casual ward and the common lodging-house are the luxuries rather than the necessities of tramp life. The season is now beginning when those who have been spending the winter nights under cover in towns will find the hedge-row or the unwatched shed or outhouse sufficient in any locality where irksome conditions are attached to the use of more substantial sleeping apartments. "Sleeping out" may be punishable when those who indulge in it are brought before the magistrate but we are all familiar with the protests raised by so-called humanitarians when "sleeping out" is "punished as a crime." The carefully inspected common lodging-house, the Salvation Army shelter, cheap food, and the indiscriminate charity of rich and poor are sometimes welcome aids to the deserving worker in temporary difficulties but they combine to render the life

of the tramp not only possible but pleasant and attractive. They enable the idle to live either by mendicancy or by crime or by both without any need to work and the example of men and women leading indolent, self-indulgent lives without responsibility or restraint is a constant temptation to others to adopt the same course. To control the beggar and the vagrant so as to prevent him from being by his example and contact a danger to his more industrious neighbours is no easy task for a country to undertake; to make a labouring man of the confirmed wastrel is still more difficult and in many cases may be found impossible. At present in the United Kingdom jails and the casual wards of workhouses are practically the only means provided for teaching him; the policeman eyes him with suspicion and enforces a Vagrancy Act passed in 1824 and the medical officer of health watches him with apprehension but cannot forcibly control his liberty to spread disease even when he is believed to have been in contact with it. The Salvation Army and other private agencies have made experiments with labour colonies and similar institutions. For organised State intervention, however, specifically directed against vagrancy we must seek examples abroad. Mr. ARMSTRONG refers to the colony at Merxplas in Belgium and to four others in that country for undesirables who are not criminals, and there are examples and experiments elsewhere. The literature on the subject published in England alone is not inconsiderable and the recommendations which have been made are numerous and in many cases of a practical nature. Legislative interference in such matters is, however, not easy to rouse and, as has been pointed out above, it usually takes the form of conferring powers upon local authorities and private individuals which they may exercise or not as they please. This is a characteristic of the private Bill now before Parliament to promote the establishment of labour colonies and to enable judges and magistrates to order vagrants to be detained in them. Meanwhile, the army of tramps does not diminish; indeed, it apparently doubled itself recently in a period of ten years and is probably still on the increase. A pedlar poet quoted by Mr. ARMSTRONG has written of the wanderer's existence—

> "If such a life as this I live
> Offend some tender, high-strung soul,
> Then I must pray him to forgive
> A blame of which I bear the whole."

But we may point out that the offence is to the soul not of the highly strung and tender but of those who have at heart the moral and physical welfare of the people and that the blame is not to be borne wholly by the tramp but must be shared by the system which permits, and, indeed, renders easy, his existence.

Feeding in Relation to the Health of the Young.

THE Victoria University of Manchester is unquestionably rendering a valuable public service in printing the little pamphlet which has recently been sent to us and which represents a report of a lecture delivered by Dr. JAMES NIVEN, the medical officer of health of Manchester, on the subject of Feeding in Relation to the Health of the Young. We gather that this is one of a series of lectures bearing on the general subject of food and drink in relation to disease. In Manchester, as in other large centres of population, the signs of the physical degeneration of the people would appear to be so obvious that it has become necessary for the custodians of the public health to take official cognisance of a state of affairs which, if allowed to drift, might have serious industrial and economic results. It is a curious fact that although it is considered by many medical men that there is a progressive deterioration in the physique of the poorer classes in our towns there are no trustworthy anthropometrical statistics on a sufficiently large scale to prove that this widespread belief is true. This state of affairs, as we indicated in a leading article in THE LANCET of April 9th, p. 1003, will probably in the near future be rectified by systematic observations of height, weight, and general physical condition, being taken in the elementary schools. Dr. NIVEN has not accepted the progressive physical degeneration of the urban population as a proposition needing no demonstration, but has attempted to prove his point by relying on statistics of mortality. He contends that there is a close relationship between the capacity of wages to obtain food and the physical condition of the people. This, no doubt, is a perfectly justifiable conclusion, as also is the deduction that inadequate and improper dieting during the periods of infancy and childhood is the chief factor in the determination of physical inferiority in later years. In his lecture Dr. NIVEN makes certain practical suggestions for improving the present unsatisfactory condition of affairs. Among the more important of these suggestions may be included the following: that teachers should be trained to look after the physical condition as well as after the mental instruction of their scholars, that there should be legislation to enable the educational authority to enforce the provision of sufficient food and the maintenance of cleanliness in school children by parents, that the educational authority should be empowered to obtain from the rates sufficient provision for the free feeding of children under certain definite conditions, that in all schools a kitchen should be provided for instruction in the elements of cooking, and finally that the poorer population generally should be instructed as to the diet requisite and the means by which it may be most cheaply obtained. This latter point is a most important one, for in the economical expenditure of wages on food—and by economical we mean economical in both a physiological and a pecuniary sense—there is still a great deal to be learnt not only by parents but by others who are supposed to be familiar with the principles of dietetics. As a matter of fact, growing children require a much larger proportion of nitrogenous food than do grown-up persons, but among the poorer classes it is almost invariably the case that relatively they receive a very much smaller quantity, chiefly for the reason that nearly all forms of food of this kind are more expensive than the less essential but commoner varieties of carbohydrates. With a little ingenuity in cooking, two very cheap and valuable varieties of food—namely, pea flour and cotton-seed oil—might be largely employed for providing the poor with palatable and genuinely nutritious meals. The value of these foods in the feeding of cattle is well known but both of them are neglected in their application to the feeding of human beings. Although we have only mentioned a few

of the many excellent points which Dr. NIVEN brings out in his lecture we have probably said enough to indicate that it deserves to be read by all those who are concerned with educational and hygienic questions.

A Bolt from the Blue.

OUR esteemed contemporary the *St. James's Gazette* has suddenly discovered, or at least has suddenly announced, that the medical profession is in a parlous state and that its "ineptitude" is such as to constitute "a national danger." It seems that while we, its humble members, were on the whole rather well-satisfied with ourselves, thinking that the more original-minded of our number had made discoveries or had introduced improvements which were calculated greatly to diminish the ravages of disease, and that the immense majority were at the very least doing their best to render these discoveries and improvements available for the service of the public, we have, after all, been self-deceivers to a pitiable extent. The *St. James's Gazette*, supported by no less an authority than that of an unnamed "old resident surgeon at a famous London Hospital," one, moreover, who has achieved the exceptional distinction of being not only "M.D." but also "B.Sc. (Lond.), M.R.C.S. (Eng.), and L.R.C.P.," has torn away the veil behind which our weaknesses were concealed and has displayed us as we are to a scornful and horror-stricken world. It appears that there are "degrees which are legal registrable qualifications, but which would not entitle the holder to be considered in a senior student or junior house appointment at a good London hospital," and also that "anyone who has done (*sic*) a resident appointment at a big hospital will tell you of the huge blunders made by town and country practitioners alike, men of poor qualifications and no experience, who will go on making the same mistakes and missing the same vital points simply because there is no one to check them." Following these cheerful and lucid accounts of our deficiencies we have a gruesome history of a man with hæmorrhagic small-pox who was brought by his medical attendant (surely at least a benevolent and kindly one) 50 miles in a third-class carriage in order that he might reach a hospital where he could be operated upon for supposed stone in the kidney, and of another man who was told that he was "dying of consumption" and must not marry and who nevertheless got well, a "chance consultation with another man," possibly the narrator, having brought to light the fact that the supposed consumption was "a sort of muscular rheumatism." As a protection against the dangers likely to arise from the employment of incapable practitioners the public are advised to study the Medical Directory, which "gives shortly a man's qualifications, his appointments, and so forth," by which course not only would "the man in the street have less cause for complaint, but there would arise by competition a necessity for more skill and experience among the rank and file of the medical profession." Even this desirable consequence is scarcely held forth as a certainty, because the correspondent adds that "the public does not see any difference between A.B., late H.P., and C.D., L.S.A. They are both equally doctors." "Late H.P." is good if, as we suppose, the mysterious initials mean "house physician." We cannot suggest any other interpretation of them, but an earlier portion of the letter described the writer as an "old" (? late) "resident" (? house) *surgeon*. It is gratifying to note that he holds the kindred office in even higher esteem than that which he would no doubt claim to have filled with distinction to himself and with advantage to his patients.

It is really pitiable that a respectable newspaper can be beguiled into giving currency to such flatulent rubbish as this. As a matter of course the medical profession, like every other, includes men of various kinds and degrees of capacity. Even the wisest of them are not infallible and only the most foolish of them think themselves so. The somewhat ungrammatical correspondent of our contemporary falls, we greatly fear, within the latter category. There are very few men of real professional learning and experience who have not encountered from time to time the "cocksure" youngster fresh from the schools or the hospital and who have not been amused by his kindly methods of dealing with their supposed deficiencies. But such youngsters, as a rule, are not eager to rush into print or to accomplish the feat known in homely phrase as "the fouling of their own nest." Generally they are more inclined to be magnanimous and to conceal the fancied errors which they plume themselves upon having detected. To write after the fashion of the correspondent of the *St. James's Gazette* is to display a profundity of unwisdom which only a very few persons can ever hope to reach. If he were to publish his name and so to seek "bold advertisement" of the skill which had enabled him to proclaim the errors of others his position would at least be intelligible, and non-medical persons of his own mental calibre are sufficiently numerous to confer upon such an enterprise some reasonable hope of success. By anonymity he cuts his own throat as well as the throats of his neighbours. When next he gives good advice to a patient he must expect to be told, on the authority of the *St. James's Gazette*, that medical men generally are incompetent and ignorant persons and that he himself is probably one of the majority. It will be of small avail for him to have an extract from the Medical Directory in his pocket-book, or even to display convincing evidence of an "old" H.P.-ship. The rule is likely to make more impression upon the patient than the exception, and even "old H.P.s," being human, must admit their liability to occasional error.

But, after all, fools have their uses and the curious effervescence of this particular example of the genus may possibly be rendered subservient to purposes of utility. It is probably true that some members of the medical profession, we believe a very small minority, can hardly be described as fit for the discharge of the duties which they undertake, and it is a question worthy of serious consideration whether for the future such persons should not, and might not, be altogether excluded from its ranks. We believe them to be mainly or entirely recruited from those who at most hospitals are known to the authorities as "chronic" students—men who from the first take but slender interest in the facts and principles which it is their duty to master and who either from idleness or incapacity are late in completing each of the stages of a student's career or who fail in successive examinations or in successive

attempts at any single one. With such men as these it is the duty of the examining bodies to deal stringently. As a matter of fact, a large proportion of them become qualified at last, although a knowledge of their habits and careers would show that they were never likely to develop into capable and conscientious practitioners. We should be glad to see final exclusion from the profession follow as a natural consequence of a certain number of failures in the examination rooms or after the lapse of a certain time from the commencement of medical study. An examining body which would inaugurate this reform would deserve well both of the public and of the profession and would take away whatever cause may now exist for the enemy to blaspheme.

Reno-renal Reflex Pain.

No fact in pathology is more firmly established than the transference of pain; a lesion of one part or organ of the body may be manifested, not by the presence of pain in the affected structure but by pain felt in some other part, sometimes even at a distance. Nearly every hospital surgeon has seen a child brought to the out-patient department with a poultice or some other equally efficacious application on the knee, while the disease which gave rise to the pain which he suffered was situated in the hip-joint. The pain, however, has been so definitely referred to the knee by the patient that the remedy has been applied to the knee also. More familiar still is the referred pain arising from carious teeth. There may be only one carious tooth but the pain is often felt in a neighbouring tooth, so that it has frequently happened that healthy teeth have been removed. The pain may be transferred still more widely, for it may be felt in any part of the area of distribution of the trigeminal nerve of the same side. With such numerous and conclusive examples of the transference of pain there is no room for doubt that a diseased organ may give rise to a pain felt elsewhere. Yet, though we cannot refuse to accept the fact of the transference of pain we are in the dark as to the manner in which the transference occurs. The nexus between the affected area and the displaced pain is undoubtedly the nervous system, for in all cases there is a close relation between the nerve-supply of the diseased area and that to which the pain is referred. It has been suggested that the transference is simply due to induction akin to electrical induction, the nerve current in one set of fibres inducing a nerve current in a contiguous set. It has been supposed by others that the nerve disturbance in the spinal or cerebral centre set up by the irritation of the disease radiates to the centre corresponding to other nerve fibres. This latter explanation might be readily accepted if the pain were felt in the diseased area as well as in the unaffected region, but the point that requires explanation is the presence of pain in a healthy region coupled with the absence of pain in the area involved by disease.

The instances that we have mentioned all refer to the transference of pain from one nerve to another on the same side of the body and if these are difficult to understand still more difficult are those cases where the pain occasioned by a lesion on one side of the body is referred to the other side. Of this many instances are recorded. The pain of appendicitis has been felt in the left iliac fossa and that without any transposition of viscera. Again, a pyosalpinx on the left side has given rise to pain on the right side of the abdomen. Most striking of all are the cases where a stone in one kidney causes pain in the other loin. To this transference of pain has been given the alliterative title of reno-renal reflex pain. Do such cases really exist? It had been taught for many years, and it was generally received, that the pain due to a renal lesion could be felt on the opposite side of the body but Mr. HENRY MORRIS has recently expressed very grave doubts as to the existence of such a renal transference of pain; he claims that in all cases where pain is felt on the side opposite to that which is found to be affected there is also disease on the painful side, though there may be much difficulty in finding it, and in his work on the kidney he has mentioned several cases corroborative of his contention. Any opinion on the subject expressed by Mr. MORRIS deserves our most careful consideration, for he has had a very extensive experience in renal surgery. The decision, however, on this point must rest ultimately on facts and even if only one such case can be shown to exist we must accept the possibility of such transference of pain. In THE LANCET of April 23rd (p. 1111) Dr. DAVID NEWMAN of Glasgow gives six cases in which he maintains that true reno-renal reflex pain occurred, three of the cases having been previously recorded. The cases are very noteworthy and prove that in some at least the kidney on the painful side was examined but was found to be healthy, while a calculus or other gross lesion was discovered in the opposite kidney. All the cases are not absolutely conclusive, for evidence derived from skiagrams of the absence of renal calculi is of comparatively little value, since a uric acid stone may give no shadow on a photographic plate and this is shown in one of Dr. NEWMAN'S cases where repeated photographs showed no trace though a stone was present. In one case, however, of those quoted by Dr. NEWMAN it was possible to examine post mortem the kidney of the painful side and this was found to be perfectly healthy though the opposite kidney contained a calculus. The mere fact that removal of a stone from the painless side is followed by a cessation of the pain does not show that the pain was due to the calculus, for mere examination of a kidney may be followed by cessation of renal pain; nothing less than a thorough examination of the kidney on the painful side can be accepted as an absolute proof that the pain is referred. The mechanism of the reno-renal reflex pain is very doubtful. Dr. W. M. WILLOUGHBY, in THE LANCET of April 16th (p. 1043), in an article on the Site of Referred Pain in Visceral Disease, suggests that in the kidney on the painful side or in some structure related to it there exists some morbid state "giving rise to no pain but throwing the cord of its own side into an irritated condition by constant afferent impulses, a condition which if interfered with by an impulse transferred across the cord might readily give rise to pain."

We must conclude from the evidence presented to us that reno-renal reflex pain does exist but it is very probable that many renal pains are ascribed to transference of pain when really there is renal disease on both sides. We should

therefore hesitate to accept in any individual case the theory of reno-renal reflex pain unless the evidence in its favour were quite conclusive.

Annotations.

"Ne quid nimis."

POOR-LAW MEDICAL RELIEF IN SCOTLAND.

IN July, 1902, in connexion with a Bill introduced by the Government with the object of removing certain anomalies of Poor-law administration in Scotland, a departmental committee was appointed by the Local Government Board for that country to inquire into, and to report on, the methods there employed in the distribution of medical relief. The committee consisted of Mr. J. Patten McDougall, one of the members of the Board, Dr. W. Leslie Mackenzie, and Mr. R. B. Barclay, while Mr. J. Jeffrey acted as secretary, and the result of its labours has just appeared in the form of a blue-book. The report, of which the first part is contained in this volume, covers a good deal of ground. After a short historical introduction relating to the period from 1845 to the present day the report treats exhaustively of indoor and outdoor medical relief and of the grant in aid of such relief, and finally offers a series of recommendations and proposed amendments of the existing poor-house rules. Two of the topics handled are of special interest to members of the medical profession. These are the responsibilities of Poor-law medical officers and the question of the nursing of the sick poor. In reference to the former subject the report says: "According to the provisions of the Act of 1845, so far as they relate to poor-houses, the only official whom the parish council are required to nominate and appoint is a properly qualified medical man who shall give regular attendance at such poor-house. And yet, while he is the only poor-house official that holds a direct statutory appointment, the rules and regulations, as now drawn up, do not give him the position, as one of the official staff of the poor-house, to which he seems to be entitled. He is too apt to regard himself as a mere medical attendant on the poor-house sick, with no right or title to advise or take part in the general administration of the house." Further on the committee expresses the opinion that "the status and position of the medical officer of a poor-house and the importance of the duties that he is called upon to discharge are very insufficiently recognised," and it proceeds to say that in framing its recommendations for a revision of the rules it has "endeavoured to invest the office with a larger responsibility and a more intimate supervision of the general administration than apparently at present attach to it," and it suggests that the medical officer should be entrusted with the care of the health of all inmates whether on the sick list or not. We commend the principles here enunciated to the favourable consideration of the Local Government Board of England. As regards nursing, Scotland appears to be behind both England and Ireland. In 1897 pauper nursing was prohibited in the latter countries but in about half of the 67 poor-houses of Scotland untrained nursing, with the help of pauper inmates, is still the rule. Naturally the committee disapproves entirely of this state of affairs and it asks that the Local Government Board of Scotland should be invested by Parliament with the powers necessary to enable it to check the abuse. The committee agrees that the best nurses for poor-house work are those trained in poor-house hospitals and it urges that the standard which requires at least two years' training should not be lowered. The propositions are summed up in the recommendation that probationers should be offered the following inducements: efficient training, with payment on a suitable scale meanwhile, and a Government certificate when competent. Under these conditions there would not, the committee thinks, be any lack of candidates. We note in conclusion that the committee agrees that arrangements might be made to accommodate different classes of poor in different poor-houses, a suggestion which has been frequently put forward in our pages.

FISH OILS AND PRESERVED FISH.

A CORRESPONDENT, who we may say at once has alarmed himself quite unnecessarily, has forwarded to us a letter and a stoneware cover. In his letter he states that the latter was removed from a tin of American salmon to which it served as a cover and after being scalded and washed it was used as a cover to a jug of drinking water. This water in an hour or two was found to have an offensive fishy odour. The water and the jug were examined and found to be free from odour apart from the cover, and this last being applied to a fresh jug of water was found to give a similar odour to the water as before, or, in our correspondent's words, "provoked the same abominable stench as still adheres to the cover. If such cases are common, can we wonder at the fearful and mysterious diseases which arise from the now popular consumption of imported food?" We are not going to enter into the fiscal problem but the cover which our correspondent kindly sent to us has only a fishy smell and there is no hint of putrescence about it. The glaze is defective and many organic oils have an extraordinary affinity for earthenware and still more for steel. Everyone knows how difficult it is to free a steel knife which has been used for oily fish—such as sardines, pilchards, mackerel, herrings, or salmon—from the fishy smell. Still more difficult to remove is the smell caused by the contact of an onion with steel and a ham will also imbue a steel knife with its flavour. Some of our readers will doubtless remember in this connexion the story of the cook-shop where "tuppence extra" was charged for a portion of beef "cut with a 'ammy knife." In the case of the fish the smell is due to the compound of the lower fatty acids or possibly of phosphorus with the iron, the onion flavour is most likely due to sulphur compounds, while the ham flavour is due to acids from the destructive distillation of wood. None of these flavours, however disagreeable they may be in connexion with a steel knife, is due to putrefaction or to anything dangerous, but in the case of fish their presence probably explains the origin of the use of special fish-knives which are made of silvered steel.

SCHOOL HYGIENE IN ITS RELATION TO EDUCATION AUTHORITIES.

AT the provincial sessional meeting of the Sanitary Institute which has just been held at Cardiff a discussion was held upon the above-mentioned subject. The discussion was opened by Dr. E. Walford, medical officer of health of Cardiff, in a paper which although in some ways merely tentative laid great stress upon the necessity for a definite "systematic and effective method of supervising the sanitation of schools and of promoting the health of the scholars on a more scientific basis than has hitherto been obtained." Dr. Walford remarked that school hygiene is a department of public health of comparatively recent growth and anyone who happened to be at one of our English public schools, or at any rate the older of them, even so recently as 30 years ago will recognise the truth of this statement. Dr. Walford allows that the teachers are in many cases quite alive to the importance of maintaining a proper standard of sanitation in the schools under their

control and that the Board of Education lays down excellent rules. But these rules are in many instances disregarded and the Board of Education seems to have no machinery for enforcing its recommendations. Dr. Walford gives various instances in which ventilation was found defective and where the only heating apparatus was one which was strictly forbidden by the Board of Education—namely, a cast-iron stove with a flue-pipe running through the wall. He further quotes an instance on the authority of Dr. J. Kerr, formerly medical officer to the Bradford School Board, in which the amount of carbon dioxide in a Bradford school was found to be 31 volumes per 10,000. Besides ventilation Dr. Walford touched upon many other points of school hygiene, such as the provision of separate seats or desks and the spread of infection by means of school attendance, and concluded by referring to the necessity for medical inspection of schools and scholars. He mentioned in this connexion the recommendation of the recent Royal Commission on Physical Training (Scotland) to the effect that it is desirable that all schools should be under medical inspection. How this is to be carried out is a question by no means easy to answer but primarily the sanitary authorities, who after May 1st will be the education authorities too, must be responsible for medical inspection. Ratepayers are only too painfully aware of the expense of education but a little more spent upon medical supervision of the schools and scholars would result in a saving to the ratepayers by the lessening of epidemics of such diseases as diphtheria and scarlet fever.

"NEURASTHENIA."

INVENTED by Beard of America in the "sixties" to describe and to include a class of nervous affections more common in America than elsewhere, the term "neurasthenia" has been used with great elasticity since then to cover a multitude of obscure nervous affections of the most varied and opposing characters, to the great confusion of exact diagnosis and of scientific treatment. A process of elimination has, however, been going on during the past decade and much has been done to clear up and to define more precisely the essential characters of neurasthenia. In the *Boston Medical and Surgical Journal* of March 31st Professor Charles Dana deals with the important differential characters of this condition. While neurasthenia is, says Professor Dana, a psychosis or morbid condition of the cerebral nervous system it is different from a large number of psychical states which, though not acute or severe enough to constitute insanity, show a definite kinship to insanity. These cases come to the general practitioner or to the neurologist by whom they are put down commonly as some form of neurasthenia, hysteria, or "degeneration." "It is my contention," adds Professor Dana, "that a large number of these so-called neurasthenics and all the hysterics should be classed as prodromal stages or abortive types—a shadowy imitation—of the greater psychosis insanity. For in these cases it is the morbid mind which dominates the situation, not a weak eye-muscle, a poor stomach, a heavy womb, uric acid, arterio-sclerosis, or even an exhausted motor nerve cell." The psychical centres of the brain are the primary seat of the disorder, but the body may also be at fault. Many of these neurasthenic conditions are understudies as it were of the graver forms of mental aberration. There are, broadly speaking, says Professor Dana, five classes of insanity which represent varying degrees of departure from mental health and stability of brain (excluding idiocy, imbecility, and the organic dementia of syphilis, epilepsy, and cerebral softening). Representing the normal condition of the ego by a horizontal line the mental departures from this line (degrees of alienation) are in the following order of increasing magnitude—viz., dementia præcox, paranoia, maniacal-depressive insanity, melancholia, phrenasthenic psychoses, and toxic and exhaustion psychoses. The insanity of puberty and adolescence, which occurs before the age of 30 years and very often before 20, sometimes may come on quietly and insidiously with a long period of pseudo-neurasthenia. Paranoia is a form of grave and progressive mental disorder which comes on after adolescence and has a tendency to a cyclical course in which there are at first depression, moodiness, suspicion, egotism, and a sense of being badly treated; then follow systematised delusions and sometimes active explosions of excitement. The course is long but there is very little tendency to dementia, for though the degree of alienation is great the organic deterioration of the brain is almost inappreciable. The condition known as maniacal-depressive insanity is harder to recognise. We see much melancholia but true acute mania is rare. But there is, adds Professor Dana, a depressive insanity which begins early in life, often develops from slight causes, and recurs again and again with slight tendency to dementia. The chronic melancholia of middle and later life is often heralded by a "history of nervous prostration or of obscure nervous attacks when in the twenties or later," which have occasionally recurred. It can readily be understood that what is a pure psychosis, as is maniacal-depressive insanity in youth, may easily be made a chronic one by the complications and degenerative changes of later life. The late development of a psychosis such as this suggests that the constitutional taint underlying it is dying out, since violent mental confusion and tendencies to dementia are not seen in the pure forms of maniacal-depressive insanity in youth. The phrenasthenic psychoses form a "degenerative" group. It includes the mental and moral perversions, hysterias, phobias, aboulias, as well as morbid impulses and imperative ideas, and the many forms of dipsomania. With all patients of this class there is a tendency to "psychical storms or explosions" as in dipsomania, hysteria, and impulsive acts, or to fixity of morbid ideas, such as obsessions of fear, doubt, superstition, and the like. These patients are also neurasthenic on the somatic side. "I have been watching for a case of neurasthenia due to excessive physical work alone," says Professor Dana, "but I have never seen it." It does not occur—for example, as the result of long and hard athletic work, nor in bicycle races, or six-day pedestrians, or in firemen and stokers. "It is also the psyche that has to be hit in order to get a neurasthenia." Neurasthenia, strictly speaking, very rarely occurs under twenty. What we see then is the pseudo-neurasthenia of dementia præcox, or dementia præcox itself, or slight attacks of recurrent maniacal-depressive insanity, or the initial symptoms of a developing phrenasthenia. The depressive and anxious types of neurasthenia occurring after the age of 40 or 45 years are usually mild forms of the involutional melancholia of middle age, while so-called congenital neurasthenia is usually a phrenasthenia, a dementia præcox, or a paranoia. Cutting out the foregoing, concludes Professor Dana, one has cut away about one-half of the great national malady attributed to America.

INFANT FEEDING IN FRANCE.

IN France the artificial feeding of infants has during recent years to a considerable extent displaced the time-honoured system of wet-nursing. Establishments known as "gouttes de lait" have arisen in various places. In these institutions, which are under medical supervision, sterilised milk is supplied to poor parents gratuitously or at a reduced rate. It is not pretended, of course, that any substitute of equal value for the mother's milk has been found. Nevertheless the feeding bottle is considered to be more wholesome and more merciful than a foster-mother and its effect

on the health of the infant appears to have been distinctly beneficial. At such a "goutte" in Rouen 128 children were supplied, 46 of these being healthy when entered and 82 suffering from gastro-enteritis. Among the former there were four deaths, two from gastro-enteritis, and among the latter 22 deaths, of which seven were due to this disease. At Amiens prior to 1900 the mortality from gastro-enteritis varied between 292 and 196 cases. In 1900 a "goutte" was opened and the death-rate from this cause fell to 168 in 1901 and 100 in 1902. In the Montmartre district of Paris there were not more than 47 deaths among 384 infants taken to the "goutte." These figures, if not definitely conclusive, at least suggest an increased security of infant life under the new system. In estimating its effect allowance must necessarily be made for occasional errors due to ignorance or carelessness on the part of mothers or nurses. After more prolonged experience the statistical records of these institutions, already far from discouraging, may be expected to assume an aspect even more favourable than at present. Artificial feeding, when thus carefully carried out, possesses an obvious advantage over foster-parentage in the fact that it insures, or should insure, the continued supervision of a mother, while it also obviates the danger of constitutional contamination by the wet-nurse. It is the plan which has always found most favour in this country where the maternal source of supply has not been available. Its employment in the like case is further justified in France by the objection hitherto entertained there to the use of milk-food preparations which are unfortunately still too freely used in the British nursery.

ANTIVACCINATIONIST GUARDIANS AND THEIR VACCINATION OFFICERS.

A MAJORITY of the guardians of the poor in the Wandsworth and Clapham union hold "antivaccinationist" views and the methods which they adopt in order to avoid the fulfilment of their public duties in respect of vaccination are consistent with their opinions. These methods are likely to prove expensive to the ratepayers of Wandsworth and Clapham who will have to pay the costs in two actions brought against their board of guardians by two vaccination officers which were recently tried together by Mr. Justice Channell sitting without a jury. The actions were brought by the vaccination officers to recover the amount of two solicitors' bills of costs incurred in the prosecution of offenders against the Vaccination Acts. Upon a past occasion the antivaccinationist majority on the board had resisted the payment of solicitors' costs for this purpose and one of the vaccination officers had in consequence ceased to prosecute offenders. As a result of this the Local Government Board, which, of course, has power to dismiss him from his office, had exacted from him an undertaking to take proceedings in future. He had accordingly resumed the fulfilment of his duties but the opposition of the antivaccinationist guardians had continued, one of these gentlemen saying to him: "If you dare to take proceedings we will employ Mr. Schultess Young to fight you." This threat, intimating that legal aid would be at the disposal of all defendents, coupled with the fact that the barrister named was, in fact, employed in a large number of cases, was strong evidence to justify the vaccination officers in employing solicitors to prosecute. Mr. Justice Channell took this view and himself pointed out the technical nature of the defences usually raised in vaccination cases. He therefore held that the vaccination officers had acted perfectly reasonably in employing solicitors to assist them and in employing them from the beginning to the end—that is, to apply for the summons as well as to support it. He did not go so far as to decide that the discretion given to the vaccination officer to employ legal assistance under Article 29 of the Vaccination Order of 1898 enabled him to do so in all cases without question. The correctness of his judgment in doing so must be liable to review in a court of law, should it be questioned. No one interested in local affairs and local finances would wish this to be otherwise. The employment of legal assistance in all cases by vaccination officers would be useless and costly and no one desires that the expenses of the administration of the Vaccination Acts should be increased unnecessarily. Considerable increase of these expenses, however, will have been caused quite unnecessarily to their ratepayers by the guardians of Wandsworth and Clapham, for not only the costs of the actions to which we have referred will have to be paid, as has been said above, but the actual amount of the judgments obtained, being the sums paid for legal assistance, must have been considerably augmented owing to the guardians' attitude. Mr. Justice Channell did not conceal his views upon this subject. He said, according to the *Times*, "that as long as boards of guardians were found who set themselves up in opposition to the law under which they had been elected, so long would their constituents be put to wholly unnecessary expenses. It was entirely the conduct of the guardians which had driven these gentlemen to seek legal assistance and if people were so foolish as to elect such people they must pay for it."

ACUTE HEPATITIS WITH JAUNDICE IN SECONDARY SYPHILIS.

JAUNDICE is a recognised complication of secondary syphilis but as a symptom of severe disease of the liver (*ictère grave*) it is very rare. Fournier in the course of his vast experience has observed only 25 cases. At the meeting of the Société Médicale des Hôpitaux de Paris on March 4th M. Armand Siredey and M. Henri Lemaire described the following case. A girl, aged 18 years, was admitted to hospital on Jan. 9th, 1904, in a delirious condition. She could not furnish any history of her illness. On the next day one of her friends gave the following details. In August, 1903, she left home and began to lead a dissolute life. On Nov. 1st she returned ill and wasted and complaining of lassitude and severe pains in the head which became worse in the evening. Some days later she showed an icteric tint which gradually increased until the end of 1903. Then there was a slight remission of short duration which was followed by an increase of the jaundice. The latter persisted up to the time of admission. At the beginning of December there were violent pains in the lower abdomen and profuse leucorrhœa. Abundant epistaxis took place on Dec. 25th and 26th. On Jan. 8th, 1904, she suddenly became greatly agitated and in the evening she was delirious and vomited several times. On the following day she was admitted. She took no notice of questions but cried out or used abusive words. There were masticatory movements of the jaw, slight rigidity of the lower limbs, exaggerated knee-jerks, general hyperæsthesia, and dilatation of the pupils. The skin was of a marked yellowish green colour. The urine contained a little albumin and abundance of bile pigments but the stools were not decolourised. On the abdomen and thorax were numerous "papulo-squamous and papulo-erosive syphilides." On the vulva and at the anus were many mucous patches and on the neck were the "marblings" of a pigmentary syphilide. There were also manifest lesions of scabies, pediculi pubis, and gonorrhœal urethritis and vulvo-vaginitis. The liver was not enlarged. The temperature was subnormal, 97·5° F. On the following day there was profound coma with muscular relaxation. Examination of the blood showed 19 per cent. of mononuclears and 80 per cent. of polynuclears; no microbes were found. Lumbar puncture yielded a yellowish liquid containing numerous lymphocytes. The lumbar

region was wet-cupped and injections of biniodide of mercury were given. Death occurred 30 hours after admission. At the necropsy the viscera were found bile-stained. The kidneys were congested. There were double salpingo-ovaritis and peritoneal adhesions in Douglas's pouch. The free ends of the Fallopian tubes were red, thickened, surrounded with false membrane, and adherent to the ovaries which were also congested and surrounded with membrane. The brain and spinal cord were congested but showed no lesions. The liver was of normal size; on section the right lobe showed a mahogany-brown colour with little yellowish masses which projected from the surface; the left lobe, on the contrary, showed a dark brown surface traversed by fibrous bands of a greenish tint and was more resistant than the right lobe. Microscopic examination of the left lobe showed extensive destruction of the cells which were in process of atrophy accompanied by fatty degeneration. They were surrounded by meshes of connective tissue, sometimes thin and sometimes dense and thick. The right lobe showed similar changes but less in degree. The kidneys were in a state of acute nephritis. A similar condition of the liver has been found in other cases of syphilis, acquired and hereditary. We may add that in the Transactions of the Pathological Society of London for 1867 the late Dr. Hilton Fagge recorded a case very similar to that reported above. A young woman had jaundice and died comatose in the sixth month of a secondary syphilitic eruption. The liver was found to be of an opaque bright yellow colour and dense consistence; it was infiltrated with nucleated fibroid material resembling that described by Gubler and others in infantile syphilis.

TWO GREEK PHYSICIANS AT THE COURT OF THE CÆSARS.

IN a passage referring to two medical men who were brothers and whose patients included members of the reigning family Pliny has left a record of the magnificent emoluments of medical practice in Rome under the Emperor Claudius.[1] He gives the name of one brother as Q Stertinius and we know that the other was C. Stertinius Xenophon who is twice mentioned by Tacitus.[2] These brothers came originally from the island of Cos and were members of an Asclepiad, or medical family, there; their grandfather, whose name was Xenophon, lived in Cos. A variety of particulars relative to C. Stertinius Xenophon and his family have recently been learned from inscriptions discovered at Calymnos and at Cos. The first which was brought to light makes only an indirect reference to the Xenophon of the Emperor Claudius but does so in a significant manner. It is a text in honour of a certain Cleonymos and in it one of his principal claims to notoriety is his relationship to C. Stertinius Xenophon. This latter personage, the text tells us, was a Roman citizen and had once been a tribune in a Roman legion. This almost certainly was the personage referred to by Tacitus and another inscription found about the same time near by, speaking of him as a friend of Augustus and of Claudius, confirmed this view. Subsequently three other texts were found all honouring Stertinius Xenophon, and the series explains to us that the brothers Cleonymos and Xenophon were sons of Heraclitos who we know, from one of the documents, was a son of a Xenophon. The text which tells us this genealogical fact is one relating to C. Stertinius Xenophon's uncle, Tiberius Claudius Philinos, whose friends, when inscribing a statue base in his honour, thought it advantageous to him to mention that C. S. Xenophon, the great man at Rome, was his nephew. But more than this it tells us that this nephew was in the medical profession. For the purpose of illustrating the career of the younger Xenophon of Pliny and Tacitus all these inscriptions are insignificant compared with a long one which was the last epigraphical evidence relating to him to be discovered. We have of this record some 18 fairly complete lines. These relate that C. Stertinius Xenophon was chief physician to the Imperial family and subsequently, at his native Cos, priest of the Asclepiad deities, Hygeia and Epione. For us, too, it divulges a most interesting episode in his career, for it relates that he had been a *præfectus fabrum*, or officer of pioneers, in the Roman army under Claudius in the British war and conducted himself with such distinction as to receive special honorary insignia from his general. It is not known whether he died and was buried in Italy or in his native Cos, but at any rate his admiring fellow islanders have not suffered his memory to be forgotten.

[1] Historia Naturalis, lib. xxix., cap. 5.
[2] Annales, lib. xii., cap. 61 et 67.

THE PARKES MEMORIAL PRIZE.

THE above-mentioned prize, which consists of 75 guineas and a bronze medal, is awarded every third year to the writer of the best essay on a subject connected with hygiene. The competition is open to the medical officers of the navy, the army, and the Indian services of executive rank on full pay with the exception of the professors or assistant professors of the Royal Army Medical College during their term of office. The subject for the next prize is as follows: "On the Sanitary Requirements of Naval and Military Units in Peace and War, with Suggestions for a Complete Scheme of Sanitary Organisation suitable for both the Navy and the Army." The essay is to be illustrated as far as is practicable from the personal experience of the writer and all essays must be sent in to the secretary of the Parkes Memorial Fund, Royal Army Medical College, Examination Hall, Victoria Embankment, London, on or before Dec. 31st, 1905. Each essay must bear a motto and must be accompanied by a sealed envelope bearing the same motto and containing the name of the competitor.

A HEAVY FINE INFLICTED UPON A QUACK.

A MAN named Lewis Hirst, summoned recently at the Bradford police court at the instance of the Medical Defence Union for taking and using a title implying that he was a qualified medical practitioner, was fined £40 and £1 8*s.* costs with the alternative of two months' hard labour. The evidence as to the infringement of the Medical Act showed that to two witnesses who called at the house where the defendant carried on his trade and who said when he appeared that they "wanted to see a doctor," he replied "I am Dr. Hirst." A bill containing his advertisement also stated that a "qualifying surgeon" was in attendance. If this expression is correctly given in the account of the proceedings before us it must be taken as implying qualification to the ignorant who would understand it to mean a "qualified surgeon," and as intended to leave a loophole of escape to the quack who would deny that he represented himself to be qualified. It may be, however, that the word "qualified" was in fact used and the matter is not of great importance as no doubt, in inflicting the exemplary sentence which he imposed, the stipendiary magistrate was largely influenced by proof of the extent to which the quack was prepared to impose upon the humbler members of the community under the disguise of a medical title. A witness who had shown to Hirst his arm was asked, apparently by the solicitor for the defence, what he was suffering from and he answered "nowt"—a reply the truthfulness of which was not questioned. The defendant, however, had said that the pretended

patient's "blood was out of order" and had added that he would make it right but that it would take him about three years to do so. It is not surprising that the stipendiary magistrate observed that such a case was an extremely bad one and pointed out how much the public were indebted to the Medical Defence Union for instituting the prosecution. We observe that the business carried on was advertised under the name of "King and Co.," but apparently no point was raised as to the existence of any company and as to the position of the defendant with reference to it.

THE DISTRIBUTION OF PLAGUE.

THE medical officer of health of the Cape Colony reports that the state of plague in the colony during the week ending April 2nd was as follows:—No case of plague was discovered throughout the colony during the week, but at Port Elizabeth 96 rats and 40 mice were bacteriologically examined, of which 10 rats and 2 mice proved to be infected with plague. In the Cape Town and Harbour Board area 265 rats were examined during the week but none was found to be affected with plague. As regards the Mauritius the Acting Governor in a telegram received at the Colonial Office on April 22nd states that for the week ending April 21st the number of cases reported was 0. As regards the Transvaal the latest figures are as follows:—Suspected cases of plague reported up to April 23rd, 160: coloured persons, 142; and whites, 18. Of these 80 have terminated fatally: coloured persons, 72; and whites, 8.

MUCO-MEMBRANOUS COLITIS AND ITS TREATMENT.

THE paper by Dr. de Langenhagen which will be found at p. 1186 of our present issue came by a happy coincidence very shortly after we had received from Dr. Bottentuit the paper on Some Forms of Pseudo-appendicitis (Entero-typhlo-colitis, Intestinal Lithiasis) which appeared in THE LANCET of April 23rd, p. 1113. The two papers have been printed in consecutive numbers for the purposes of comparison and mutual confirmation but in thus presenting the views of these physicians we do not wish our readers to assume that we entirely endorse them, still less that we hold a brief recommending the treatment carried on at Plombières as superior to that at Vichy, Carlsbad, or many other English or continental hydropathic centres. The two articles are left to speak for themselves and they supplement each other in an interesting manner. Dr. Bottentuit's contention is almost a protest against the prevailing fashion of appendicitis; at all events, he calls attention to two conditions often associated and often mistaken for appendicitis. The name of the first is sufficiently ponderous—viz., "muco-membranous entero-typhlo-colitis," formerly known as "catarrhal enteritis." The second is happily more simple—viz., intestinal lithiasis—and, like the former, it is stated to be dependent upon a gouty or arthritic diathesis. In this paper the author is content to indicate what he believes to be the diagnostic features which will conduce to the avoidance of error and he attaches special importance to the examination of the stools for slimy substance, false membrane, or sand. Dr. de Langenhagen, on the other hand, passes quickly over the description of muco-membranous colitis to reach the question of treatment. The clinical picture, however, bears strong resemblance to the first condition described by Dr. Bottentuit, though perhaps greater stress is laid upon the importance of atony of the large intestine. His description of the treatment he advocates is very full. The dietary, with the exclusion of fat and green vegetables and the substitution of very small quantities of rusks in place of bread, would appear to offer grave difficulties. His main contention, however, is a plea for thorough systematic irrigation of the intestine with a quart or a quart and three-quarters of water at a temperature of from 35° to 45° C. slowly passed in at a low pressure. From what is said of previously boiling the water used for irrigation and of the admixture of various softening or medicated substances it is obvious that this treatment might be conducted anywhere under skilled guidance and with proper appliances. A third feature, the "hydro-mineral cure," is, according to this author, only to be carried out satisfactorily at Châtelguyon or at Plombières. The former is advocated for drinking the water when constipation is a marked feature, while special advantages are claimed for the baths and irrigation at the latter when catarrh is intense and neurasthenic phenomena are pronounced. The different principles of treatment thus enunciated might almost be expressed in anatomical phraseology as "from above downwards" and "from below upwards." Seriously, however, whatever opinion may be formed of the treatment in these or other hydropathic resorts there can be no doubt that good service has been done in these two papers if they direct attention to conditions which are frequently ignored. It is to be feared that operations for supposed appendicitis may sometimes be undertaken when perhaps a little further patient investigation might have led to less heroic but more satisfactory measures.

THE METROPOLITAN STREET AMBULANCE ASSOCIATION.

As has already been announced in our columns the first general meeting of the Metropolitan Street Ambulance Association will be held on May 2nd, at 20, Hanover-square, London, W., when Mr. Reginald Harrison will take the chair. The following three motions will be proposed:—

1. Proposed by Sir William S. Church, President of the Royal College of Physicians of London, and seconded by Sir E. Cooper Perry:—

That this Association, having considered the present condition of ambulance provision in London for dealing with cases of accident and sudden illness in the streets and public places, is of opinion that there is urgent need of organisation under one body of an improved ambulance service, summonable by telephone and provided with more rapid transport.

2. Proposed by Mr. J. Tweedy, President of the Royal College of Surgeons of England, and seconded by Sir Alfred Cooper:—

That having regard to the excellent ambulance services organised by municipal authorities elsewhere this meeting is of opinion that the London County Council is the body by which such service should be provided and maintained.

3. Proposed by Sir Thomas Barlow and seconded by Mr. G. H. Makins:—

That the foregoing resolutions be communicated to the London County Council by deputation and that the officers of this Association be requested to arrange for the coöperation and support of other representative associations and persons for this purpose.

It is to be hoped that a good attendance of medical men will assemble so that the public and the London County Council may see that the movement is an important one in behalf of a much needed reform. The present position is discreditable to the largest city in the world and a source of danger to the public. We have every reason to believe that the London County Council is alive to the seriousness of the situation and wishful to adopt, at any rate in substance, the views of this association.

THE INFANTS' HEALTH SOCIETY.

WE have received a letter signed by the Duke of Portland, the Earl of Mansfield, and other influential gentlemen intimating that the Infants' Health Society was founded on Feb. 11th and that one of its objects is "to spread a knowledge of, and to put on an organised basis, the best methods of systematically dealing with the chief factors affecting the health and life of infants." The society has appointed a special committee to carry on the Infants' Hospital which was established in March, 1903, and is situated is Denning-road,

Hampstead, London, N.W. The hospital, therefore, serves as a nucleus for the propagation of the society's views and as an illustration of its methods. The Duchess of Teck is president of the society and the Earl of Mansfield is chairman. There is a large general committee, in which ladies are in a slight majority; the medical members of the committee are Sir Alfred D. Fripp, Dr. Henry Ashby, Mr. A. W. Mayo Robson, Dr. F. M. Sandwith, and Dr. Ralph H. Vincent. The bankers of the society are the London and County Bank (Westminster branch) and the secretary is Mr. R. R. Garratt, 120, Victoria-street, S.W. Membership of the society is open to all who sympathise with its objects. The hospital is entirely free to the infants of the necessitous poor, no payment of any kind or letters of introduction being required.

ST. BARTHOLOMEW'S HOSPITAL.[1]

THIS is a little 32-page pamphlet adorned as to its cover by a sketch of the Good Samaritan by the President of the Royal Academy. *Pace* Professor Clifford Allbutt, we do not like the term "Bart.'s," but, after all, it is no worse than "Powle's," as our ancestors used to call St. Paul's Cathedral. Be this as it may, Sir W. P. Treloar's appeal is well written. It is short, convincing, and set forth by a plain business man for his fellows of like kind. We need not here recapitulate the arguments which we put forward in the columns of THE LANCET of Dec. 5th, 1903, p. 1587, as to why St. Bartholomew's Hospital should continue to stand where it has stood for 800 years and why the citizens of London and all those interested in the hospital should subscribe. The City of London is never behindhand in works of charity and St. Bartholomew's Hospital is pre-eminently the City hospital. We hope that all those whom Sir W. P. Treloar's appeal reaches will read it and will accede to the request therein set forth. In round numbers £500,000 are wanted. Let it not be said that the citizens of London and those whom the hospital has sent to all parts of the world have been asked in vain.

THE DIAGNOSIS OF FRACTURE OF THE BASE OF THE SKULL.

IN a fracture of the base of the skull most of the signs of fracture met with in the bones of the limbs are wanting. There is no deformity, no abnormal mobility, no crepitus, and we have to depend on collateral evidence of the fracture Hæmorrhage from the ear is greatly valued, and deservedly so, for it is usually produced by a fracture passing through the middle fossa and involving the tympanic cavity, while it is also necessary that the membrana tympani should have been torn. Hæmorrhage from the ear after a fall may, however, be due to a local injury to the external auditory meatus. We print on p. 1235 of this issue of THE LANCET a communication from a correspondent who reports a case of severe injury to the head followed by hæmorrhage from the ear and from the nose. Temporary deafness also was present on the same side, and our correspondent suggests that fracture of the base of the skull had occurred. This diagnosis is very likely to be correct and the fact that the patient was never laid up and that no ulterior results ever occurred in no way tend to discredit the diagnosis. It is not improbable that fracture of the base of the cranium is more common than is thought and that it is present in many cases in which it is not even suspected. Unless it is rendered manifest by hæmorrhage or by the loss of cerebro-spinal fluid it is impossible to be sure that a fracture of the base has occurred. From the point of view of therapeutics it is well to treat all doubtful cases with the same care that would be given to obvious fractures of the base.

[1] "Bart.'s": its Past, Present, and Future. An appeal to the Citizens of London. By Sir William P. Treloar, Alderman, chairman of the Special Committee appointed to collect funds for the reconstruction of St. Bartholomew's Hospital.

CHILDREN'S COUNTRY HOLIDAYS FUND.

THE annual report of the work done by this excellent fund was presented at a meeting held in the Hôtel Métropole on April 28th at which, in the unavoidable absence of the Duchess of Albany, Princess Alexander of Teck presided. The number of children sent away by this fund during 1903 for a little bit of country or seaside life amounted to 34,434—nearly 200 more than in any previous year. This number cannot be largely increased, however, until the various schools close at different times for the holidays. Most of the children sent away were distributed among more than 1000 villages, where they resided in cottages. A new and pleasing feature has been introduced by the supply of boxes of games and books on country subjects for the amusement of the children at some of the villages. Gifts of games and books have been very welcome in this connexion. The subscription list, although greater than that of 1902, is less than that of 1901 by £1800. The Earl of Arran has undertaken the duties of treasurer in place of the Hon. A. Lyttelton who has not been able to spare the time necessary for the work since he became Secretary of State for the Colonies. It is to be hoped that the Children's Country Holidays Fund will be enabled to continue its good work this year in a still more satisfactory manner.

IN connexion with the recent visit of the King to Copenhagen Professor Thorvald Saxo Viggo Petersen, physician in ordinary, and Professor Jens Schou, surgeon in ordinary, to the King of Denmark, have been made honorary Commanders of the Royal Victorian Order, and Dr. Christen Martin Wittü-en le Maire, resident surgeon to the King of Denmark, has been appointed honorary member of the Fourth Class of the same Order.

Mr. Edwin Fullarton Hatton, M.D. Toronto, M.R.C.S. Eng., superintendent of the lunatic and pauper asylums and medical officer of the No. 2 district of the island of Grenada, has been appointed by the King as an official Member of the Legislative Council of that island.

THE annual dinner of the Epidemiological Society of London will be held at the Grand Hotel, Trafalgar-square, London, on Thursday, May 12th, at 7.15 P.M. The chair will be taken by Dr. B. A. Whitelegge, C.B., the President of the society.

THE festival dinner of the City of London Hospital for Diseases of the Chest, Victoria Park, E., will be held at the Hotel Cecil on Friday, May 13th, at 7 for 7.30. The Right Hon. the Lord Mayor of London will preside.

THE annual Medical Mission meeting of the Church Missionary Society will be held in the Queen's Hall, Langham-place, London, W., on Wednesday, May 4th, at 7 P.M.

EDINBURGH UNIVERSITY CLUB OF LONDON.—The May dinner of the Edinburgh University Club of London will take place at the Criterion Restaurant on May 11th at 7.30 o'clock. Sir Robert Finlay, K.C., M.P., Lord Rector of the University, will preside and amongst those who have accepted the invitations of the club are Mr. Justice Darling, Mr. J. M. Barrie, Captain Robert Marshall, and others. It is expected that a large number of members will be present to support the chairman.

SOME REMARKS ON PATHOLOGICAL SCHOOLS.

BY EDWARD S. PRIOR, M.A.,
ARCHITECT OF THE CAMBRIDGE UNIVERSITY NEW MEDICAL SCHOOLS.

A NEED has come for a fresh departure in the planning and construction of schools for special purposes. The architecture of such schools has long been at the mercy of the traditional idea that building is a compromise between the ornamental styles—that are considered those of art—and the building ways—that are considered those of modern construction. The fact is that the systematic training of architects has been almost entirely in the technicalities of house and church building. Architecture has been defined in the terms of such building, and the planning of schools has been evolved mostly as a hybrid—some cross or other between a mansion and a religious meeting-house. No doubt one class of school, that of the school board, has emancipated itself in some hands and has been built for its purpose. But even with this model how few are the private or public institutions for scientific education that show building individuality or such adaptation as declares specifically the object for which the building exists. Whether that be divinity, music, or shorthand, planning and construction usually have kept to a colourless unconsciousness. But even the school board model is not adapted for the more technical kinds of school building. The accommodations of these are not for classes taught orally but for students trained in laboratories (rightly called working rooms), by working in which scientific practice grows into the habit of the student's life. The medical school is, perhaps, the most special of such laboratory schools and has many needs which cannot be approached on the basis of ordinary architectural method. Its essentials of efficiency differ widely from those of a church, a mansion, or a public building. The canons, say, of the architectural competition as to planning would be hopelessly at fault in judging of the plan of a pathological school. And no less does the construction of such a school stand outside current building practice. Not only must it have special provisions for its economy but even a wholesale rejection of many time-honoured traditions of building. To some extent this is true of all medical building in which scientific sanitation is attempted, and it may be thought that the medical school comes under the heading of hospital architecture. But in practice the hospital model takes one but a little way. The ward system, with its lighting and ventilation, its isolations and publicities, the effective combination of which makes the hospital plan, has no counterpart in the necessities of a building which is essentially not a dormitory but a workshop; which is no caravansary for sojourners under observation but rather a group of cells for the training of neophytes, the hermits of science who may attain perfection.

I propose here to give some slight account of the steps which lead the planning and construction of the pathological school away from the traditions of ordinary building, and I deal first with *construction* because in it we have the foundation of planning which is conditioned by it to an extent that is sometimes not perceived. The fact is that houses and churches have so long been in the habit of life that the initial compromise as to their building and planning—that give and take between what could be built and what was wanted to be built—has left little remembrance of itself. But all forms of building art are based on such a compromise: and when new needs of convenience arise then a new review must be made of the facts of construction, and the terms of agreement between art and use rearranged thereon. It will be seen at once how the necessities of a medical school call for divergence from the builder's habit. Our English technique of building for some centuries has developed itself in a system of *pace work*—the deliberate masking and draping of the lay figures of bare construction. The misfits have been taken quite unconcernedly—disregarded hollows have been allowed to multiply beneath the skin of style. But such get full of fluffy dust or worse; they are the lairs of black-beetles, spiders, rats, and mice, so that an old house is indeed a place of many mansions—a zoological museum with whole sets of uncatalogued specimens. Now a pathological or bacteriological school ought to be aware of what it propagates, lest by chance the cultures, the observation of which is its business, prove too successful and escape where they cannot be controlled. The medical building really cannot follow the older traditions; the signal is at danger and the art of building must be switched on to a new course in order to run with ordinary safety.

The essentials of construction for medical schools are: (1) perfect solidity of all the inclosing construction, so that no unfilled spaces are left in its walls, floors, or roofs; (2) a smoothness of all the surfaces and the elimination of all crevices and ledges for dust; and (3) such a treatment for all corners and angles that they can be easily and thoroughly cleaned. How far this means a revolution of ordinary building modes will be understood by anyone who will look at an ordinary building in course of construction.[1] For example, joisted floors are mostly but a series of catch-pits into which dust and dirt perpetually drift and which are quite uncleanable. Most of the patent concrete floors have hollowed spaces in their body and are open to the same objections. Then the whole tradition of wall ornament, of its skirtings, surbases, cornices, of its door architraves and window linings, fosters not only the numberless little zoological lairs which we have hinted at, but a system of elaborated dust ledges, such as spring cleanings never thoroughly clear. Moreover, the habit of cubic construction makes corners into which no cleaning implement can find its way; nests where without disturbance dirt colonies may live for generations.

Now it is possible to build without accepting the laws of all this tradition and (though it is not to my point here) the art and beauty of building need not suffer by their rejection. For though these cornices, architraves, &c., are now the associations of architectural taste, yet it was strictly in the meeting of definite needs that these associations were created, and other needs can produce new associations of equivalent value. If we build for the direct object of cleanliness we shall create associations of taste. For the beauty of art seems to spring insensibly out of the simple expression of some direct need. It has certainly always been so in the building art. The simple necessity of vaulting in stone was an impetus to Gothic art, and vaultings of perfectly unadorned construction are beautiful. A clean unequivocable building for the purpose of defence was the Château Gaillard and of it said Richard Cœur-de-Lion, "Is she not fair, my one-yea old?" Certainly so far as the constructed shell of a building is concerned, there need be no concealed vacancies, no square angles, no projecting dust traps; doors and windows can be smoothly modelled and need have no architraves or other trappings of traditional architecture; skirtings and cornices can be part of the walls which they adorn instead of additions which only sham solidity; rounded modellings and shaped angles can give facility for cleansing. And the art of all such building need be none the worse—nay, rather the better—for its independent return to first principles and the rejection of the creeds of some outworn art. Finally, roofs (though this is the hardest task) can be such constructions of concrete and steel that the necessary spans are covered on the safe principles of smoothness and solidity, with no residuum of unventilated crannies, with no unsuspected catchpits and vantage-points for dust, not even a rivet-head need project. There are adaptations of present day materials which can build all this without difficulty or expense; the desire to do it has only to be urgent and the way is open. Again, the finishing of the rooms of a medical school can be approached on the same lines of construction being direct for the purpose. We can claim help from one or two simple devices—notably that of "bracket-bricks" or built-in iron blocks for the fixing of all supports, we can use forms of solid partitioning and certain patent slabs which can be made jointless. One principle, if steadily adhered to, will allow perfect cleanliness if it does not actually enforce it. It is this—that the level tops and all ledges or holes that are necessary should be where they are directly open to the eye; and secondly, where their cleaning can be thorough and systematic. All the furniture of a laboratory can be constructed and placed so that it is sealed from dust as to its interiors and so that its exteriors can be submitted to constant cleansing.

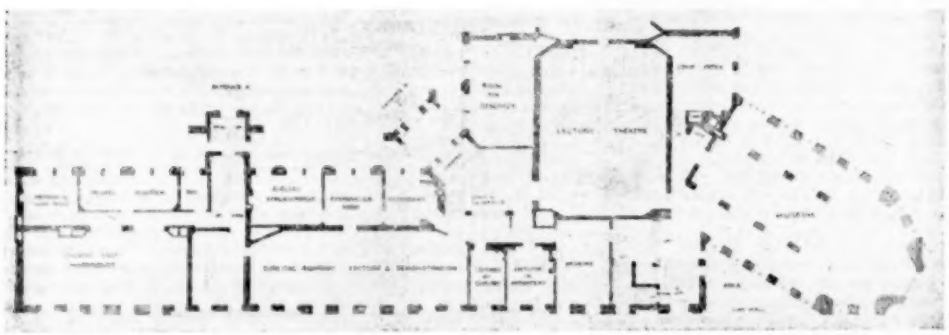
There are difficulties, no doubt, with the pipes—the light and water conductors—the wastes, taps, sinks, and shaftings of a laboratory. The wastes can be glazed channels in the floors, made to run straight to the outside of the building,

[1] The extent to which what appears solid in building is really cellular is not generally understood. Many walls are built purposely hollow and, with purpose or not, the trade bricklayer using as little mortar as possible leaves the walls half air-space.

with removeable covers so that their whole lengths can be constantly inspected and flushed. All pipes can be best managed by their being placed on the walls where they can be directly got at and where the least accumulation of dust and dirt about them can be detected. They should be painted white so that the dirt may be conspicuous and this provocation to cleanliness should be everywhere adopted, for it is fortunately supported technically by the fact that white paint is the only pure paint, all colouring added thereto being a detrimental adulteration. The stair flights of public buildings as ordinarily constructed provide many little fastnesses for the dirt tribes from which no cleaning implement can drive them, but construction can minimise the deeply set angles where the treads abut on the walls and there is no necessity to add to medical staircases such accessories of style as dust catching balustrades. The science of sanitary materials for wall surfaces has for some time received considerable attention in hospital construction and I do not propose to enter on the discussion of specialities as to which rivalry exists. But one may point out as extraordinary that while there has been keen competition among the manufacturers of perfectly smooth non-absorbent substances in the way of glazed tiles, &c., the pertinent facts as to the fixing of these tiles and ultimate history of their glazes have been disregarded. Most of the glassy wall coverings offered have the objection that, perfect in themselves, their joints cannot be made thorough, so that the attachment of them to the walls leaves crevices. And too often the most glassy surfaces carry in themselves the seeds of destruction. In fact, the higher the glaze the greater the tendency to scale, owing to the high tension and the uneven contractions of the surface and under material. The best success has been with the thick rougher glazes and coarser makes the jointings of which can be made thorough.

no need to make them thick stone mullions and transoms, as under the belated traditions of style is often done as a sort of compromise between use and art. For art's sake the top lights are glazed in little squares; while for use formless big sheets below advertise themselves as in obvious disagreement. Indeed, thick mullions and the heavy transom become particularly bad for the microscope that has to be used at a distance. The best lighting of a working laboratory for a class of students where tables have been ranged behind one another is that of the weaving shed, with north sloping skylights. But in order that the necessary bars of the skylight construction may not spoil the microscope field for work at the tables the height of the room must be as low as possible. The nearer the skylights are to the work the greater the unbroken spaces in the reflection. Such weaving-shed roofs require careful construction to be successful. The ordinary steel building of roofs has had no thought of minimising to the utmost the ledges for dust and dirt.

It will be seen how immediately these essentials of lighting connect the constructive question with that of planning and arrangement. Where the aspect and construction of certain rooms are exactly indicated by the conditions of microscope use the available spaces must be mapped out accordingly. The plan must provide for the constructions necessary to this purpose and dispose the other parts of the building to suit. Besides the laboratories in which microscopes are in use the equipment of a medical school needs lecture theatres and oral class rooms. Now here, too, we come upon conditions which separate the building of the medical school from that of others. Under modern conditions of teaching by the projection lantern the use of artificial light in the medical lecture room is almost constantly required. Hence it is want of economy labor-



The ground floor of the Cambridge Medical Schools, showing the lecture theatre dependent entirely upon artificial light.

The sketch I have made above of what is possible in laboratory construction has to be supplemented in many particulars. Especially the controversial question of heating and ventilation has to be reckoned with, since decision on this point involves many constructional consequences. Particularly the mechanical appliances necessary for the shifting of the air and the fittings required to regulate its proper course throughout the rooms must be so applied that they do not create those dirt traps and that dust concealment which all the rest of construction has striven to minimise. The lighting of laboratories is also a special point in their architecture and one that is often shirked or considered as an afterthought instead of a consistent factor in the problem of their design. For most of their purposes north light is the only one that is satisfactory. East light is better than west, since the use will be more often in the afternoon, but south lighting should be used only for the less distinctive departments and offices of a medical school. But it is the make of the windows that needs specialising, seeing that their use is to light microscope practice. They have to be made convenient for two ranges of tables, one at the windows and the other back in the room. It has been found that at table-height and at a distance of ten feet (which is a convenient distance for the second range of microscopes) an unbroken oblong opening of glass 24 by 20 inches gives the proper field. The divisions to carry such sheets of glass need to be strong and so are best of iron. There is

loudly to give what is not wanted for the lecture theatre, an outlook upon open areas the wealth of daylight of which is of such importance elsewhere. Yet so strictly does architectural convention apply its canons that the building of a room without admission of daylight to it is reckoned a freak. For the pathological school this vagary is, however, not only to be sanctioned but made the direct way to success in planning economically and to the purpose of the building.

On all sides do the conventions which govern the planning of most public buildings fail us for the dispositions of a medical school. Access by means of broad corridors, the symmetrical approach to the rooms and the serried arrangement of them in sets are the qualities which show well in the paper planning of our public buildings and obtain their reward by success in competitions. But the medical school needs none of these and indeed must count all such stateliness as waste of space. The arrangements of workshops and factories, not those of public offices, are most convenient to it. It must cluster functional departments round the laboratories, giving immediate openings from room to room and providing a general inter-communication in which much corridor is inconvenient. In its lecture theatre and libraries and museums no doubt the ordinary arrangements for allowing easy approaches must be studied but with many differences from those in use for a less special institution.

As to its lecture theatre, a large preparation room should be immediately attached to the rostrum of the lecturer whose

table should be in sight from all the benches and provided with special arrangements for lantern work. It is a useful point that the access corridors by which the students reach the theatre should be large enough to have cases set in them, so that the students passing in or out may supplement the lecture by personal study of specimens illustrating the subject treated.

The library, just as the lecture theatre, should of course be centrally placed and easy of access. Seeing that the majority of books to be consulted by the medical student are special rather than general works, there need not be those facilities for reference to open shelves which general libraries develop to the full. The block system of stacking the books together, with bookcases that pull out into the room, should be used for such a library, since it gives central spaces for a student's table as well as allowing the bulky library of a medical school to be in a form in which it can be easily consulted. In the same way the medical museum is not quite on the lines of other museums, since its specimens have constantly to be brought into the lecture theatres and laboratories.

Another special department of the medical school is that which provides the rooms for private research. As already said, the scientific education does not lie in a few years' attendance at lectures but is the inducement to a mental habit to be exercised on constant experiment. The placing of the student where he can proceed with definite work is the necessary complement of his preliminary training. Now to equip all this experiment there are many special departments that a pathological laboratory must provide—rooms for cultivation, for sterilising, for distillation, for freezing, for cremation, as well as for photography, glass-blowing, &c. All this bears out my initial definition, that the basis of the medical school planning lies in the idea of workshops or scientific factories. And in this connexion one necessary provision, that of sheds and stables where can be properly housed both the larger and smaller animals necessary for pathological experiment, can be seen to mean a very special contrivance in the planning.

[To give some distinctness to the variety of feature which the arrangement and equipment of a medical school involve Mr. Prior inclosed the plans of the Government laboratories at Netley which the War Office proposed to build for the Army Medical Service. The arrangements were planned under the direction of Professor A. E. Wright and Professor R. H. Firth but the buildings have never been put up. When the foundations had been dug it was decided at headquarters that Netley was not the proper place for a medical school. Since there was a perfectly open site for this building the dispositions were unfettered and an order and symmetry could be adopted which the very confined site of the Cambridge Medical School did not allow. The latter, however, when completed, will deal with a much wider range of scientific requirements than the somewhat limited purpose of the medical school at Netley proposed. We therefore refer our readers to a fully illustrated article on Mr. Prior's new and highly successful medical schools at Cambridge, which were opened by His Majesty the King at the beginning of last month (see THE LANCET, Feb. 27th, pp. 599 *et seq.*). It will be seen by that article how closely Mr. Prior has adhered in practice to his tenets, and it will be admitted that his buildings have lost nothing æsthetically by his intention to subordinate every feature, whether of construction or ornament, to his aims of practical utility.—ED. L.]

THE ROYAL ACADEMY.

THE one hundred and thirty-sixth exhibition of the Royal Academy of Arts, which will be open to the public on Monday next, contains many good and interesting pictures. There are others deserving neither qualification and it would be surprising if this were not the case, for the rooms at Burlington House contain nearly 2000 pictures, water-colours, drawings, miniatures, sculptures, and bronzes. On the whole, the level of achievement, we think, may be considered high, certainly higher than that attained by the other annual exhibitions. The hanging committee has had regard to modern developments in painting and the old Academicians have only sparingly availed themselves of their vested right to space, so that room has been found for a representative collection of works of art of which, as a non artistic people, we need not be ashamed.

Of course, there are some dreadful presentation canvases, dull scenes or unlovely people in unbecoming costumes, whose features no painter's skill has been able to make into a pleasing show. But there are, on the other hand, some beautiful portraits, Mr. Sarjent and Mr. Shannon in particular carrying on the traditions of Reynolds and Gainsborough. Mr. Sarjent sends six large portraits, three of women—Lady Lathom, the Duchess of Sutherland, and Mrs. Wertheimer—and three of men—Lord Londonderry, Major General Wood, and Mr. Devitt. Of these the women are the best. Not that they have necessarily had the most care bestowed upon them, for probably the portrait of Lord Londonderry in Coronation costume, bearing the sword of state and attended by his page, is the most elaborate of all. Nor have concessions been made to prettiness in the female portraits, for the Countess of Lathom is represented with a markedly asymmetrical mouth, while her arms and hands do not strike us as being elegant factors in so stately and highbred a total. Still, it is impossible not to feel that the portrait is a lifelike though uncompromising representation of the sitter, and the same may be said of the somewhat smaller portrait of Mrs. Wertheimer. As in the case of Lady Lathom the colour scheme here is sombre, but the blacks and greys and yellowy browns make up a very pleasant picture. The Duchess of Sutherland, on the contrary, is painted in a glorious metallic green robe, contrasting vividly with her sunny hair. She has a high colour and a bright smile and is altogether a very satisfactory example of young and splendid womanhood. Mr. Shannon sends four portraits—Mr. Martin Harvey in his well-known representation of "Sydney Carton," Sir William Emmerson, the President of the Royal Institute of British Architects, Miss Gladys Raphael, and two young ladies, daughters of Mr. W. H. Bell, painted together on a sofa. In this picture Mr. Shannon is particularly happy, the figures are restful, as figures on a sofa should be, the poses are natural, and painter and sitters are alike to be congratulated. Mr. William Orpen's portrait of Mr. Charles Wertheimer is a very satisfactory performance. Mr. Arthur Hacker sends an admirable portrait of the Rev. E. S. Roberts, for many years tutor and now master of Gonville and Caius College, Cambridge, whose features will be familiar to several generations of Cambridge medical men. Mr. Cope's portrait of Lord Alverstoke, Mr. Herkomer's portrait of Mr. Chamberlain, Mr. Bacon's portrait of Mr. T. P. O'Connor, Mr. Furse's portrait of Sir Francis Mowatt are all sound pieces of work and the same may be said of Mr. John Collier's portrait of Professor Ray Lankester, but in a portrait of Mr. H. T. Butlin this gifted artist hardly does himself justice. Mr. Draper's portrait of the nonagenarian Duchess of Abercorn is worth attention. It is a sympathetic representation of dignified old age, while the pains that he has expended upon the hands should be noted, pains which Mr. Sarjent appears to think waste of time.

Among many good landscapes the canvases of Mr. Joseph Farquharson, Mr. Arnesby Brown, Mr. David Murray, and Mr. La Thangue are noticeable. Two of Mr. Farquharson's four canvases show that he can tear himself away from snow scenes, and it is to be hoped that he will not allow the public, who are so insistent upon an artist repeating himself, to confine him to perpetual midwinter. Several terrible examples this year among the Royal Academicians of the result of the constant treatment of the same theme in the same way should prove a warning. Mr. David Murray continues to paint in Constable's country and it speaks much for his skill when we say that his rendering of Flatford, showing the present appearance of the scene of the master's famous picture, "The Hay Wain," is quite satisfactory. Two of Mr. La Thangue's pictures are Italian scenes and two are English, and all four are excellent, the work of a man who has seen often, and never without learning some lesson, the effects of light, shade, and atmosphere which he depicts.

Sir Lawrence Alma-Tadema sends only one small but characteristic study—some classical ladies looking from a marble building over a blue sea. Sir E. J. Poynter and Mr. Orchardson, who run him close in cultivated favour, send three pictures each, but nothing of the first importance. The President's picture in Gallery II., "The Nymph's Bathing Place," is certainly beautiful, but the lady's skin seems to have been painted more to fit the colour scheme

than to imitate anything in life. Her bronze cuticle, with her brown-red robe and her brown-auburn hair, makes a delightful harmony and she is an exquisite young person but to the coldly medical eye she has a funny tint. A picture by Mr. Seymour Lucas in the same gallery, entitled "Finis," shows very skilfully the restful abandonment into which a performer on the 'cello has fallen at the end of his task. The droop of the body and limbs following on muscular relaxation has been accurately caught.

In Galleries III. and IV. will be found most of the portraits to which we have alluded. In Gallery V. the most conspicuous pictures are the central panel of a reredos by Mr. Abbey, whose deliberate mediævalism looks rather out of place in its environment; "Timber Hauling in the New Forest," by Miss Lucy Kemp-Welch, a fine, vigorous, and very large picture; and a symbolical work by Miss Offor. The last is a well painted female figure, but the work is made a little ridiculous by the verse which it is supposed to illustrate, for although the damsel is supposed to be engaged in a long and weary climb barefoot over rocks there is not a trace of muscular exertion in the well-painted body, no scratches mar the contour of her elegant feet and hands, and her legs are entangled in a wrap that would effectually impede the ascent that it is her allegorical duty to achieve.

In Gallery VI there is an impressive little picture by Signor Antonio Mancini entitled "*En Voyage*." In Gallery VIII. two large allegorical pictures overshadow everything, "Mammon," by Mr. Rob Sauber, and "Despised and Rejected of Men," by Mr. Sigismund Goetze. The latter picture contains some carefully executed types of modern civilisation, the young man of pleasure and the young woman of the same bent, the low sportsman, the bar loafer, the soldier, the man who has come down in the world, the prelate, the deserted mother, and so on. The meaning of the canvas is very obvious and it will probably attract the attention of the public. Two small pictures in this gallery are worth attention, "A Sunny Shore," by Mr. Lionel Smythe, and "The Viaticum," by Mr. Chevallier Tayler. The cleverness of Mr. Tayler's street scene is conspicuous, the crowd of hucksters and loafers forming a piquantly contrasted background for the priest, the holy nature of whose errand is recognised only by the Italian organ-grinder.

In the sculpture gallery we noticed a capital bust of Mr. Alfred Willett, F.R.C.S., and another of the late Sir George Humphry, both by Mr. Hope Pinker.

We close our necessarily brief notice of the oil paintings of the exhibition with a query, Did Joan of Arc suffer from Graves's disease? Mr. Frank Dicksee would have us believe so and Mr. James Sant appears to be of somewhat the same opinion.

LORD CROMER'S ANNUAL REPORT ON EGYPT.

IN a prefatory letter to the Marquis of Lansdowne Lord Cromer expresses a fear that his report "will be found tedious" on account of its length. We do not think that he need be afraid of this. The clear and succinct narrative in which year by year he records the results of his stewardship will always be full of interest for his fellow countrymen. Nothing within the last quarter of a century has added more to the national reputation than the establishment in Egypt under Lord Cromer's guidance of order and solvency instead of anarchy and ruin. It is truly a marvellous piece of work, challenging comparison with events of a similar character whether in ancient or in modern history; but they alone can fully appreciate its excellence who knew the country under the old *régime* and can understand the complicated international tangle in the midst of which all reform had to be effected. In 1883 the fate of Egypt was in the balance. In Lord Cromer's words: "The chaos and confusion, resulting partly from a long course of misgovernment and partly from the special circumstances of the moment, were indeed extreme. ..... Stated in the most general terms the main object to be pursued was manifestly to substitute another bond in the place of that which previously existed and which had recently been strained to the extent of producing what really amounted to a revolution—for it is altogether a mistake to suppose that the Arabi upheaval was merely a military mutiny and nothing more." To save the State from political and social extinction a master mind was needed and happily the occasion brought forth the man. The rehabilitation of Egypt in such exceptional circumstances is in truth an achievement of which every Briton may well feel proud. No wonder Lord Cromer's reports are increasing in length. As he says: "Fresh interests are rapidly springing up. Egypt is in a state of transition and the problem of adapting the whole machine of government to meet the wants of a society which is almost bewildering in the variety of its component parts becomes daily more complex." At first the material improvement of the country could alone be attempted but as soon as possible action was taken towards the moral amelioration of the mass of the population. "I have no hesitation," continues Lord Cromer, "in stating that the action taken during the last 20 years in this field has produced the intended result. At no former period in their long history have the people of Egypt been so prosperous or so contented as at present. The forces of reaction have in well-nigh every direction undergone a signal defeat. The system of personal government as previously practised in this country—which found in those forces its most potent ally—has received a blow from which it can never recover and from which I hope and believe it will never have a chance of recovering." Lord Cromer being well known as the personification of discretion an authoritative statement of this description is most satisfactory.

Turning to the detailed information, which as usual is supplied under separate headings, we find much that has a special interest for medical men and sanitarians. Notwithstanding a surplus of revenue over expenditure at the close of 1903 amounting to upwards of three-quarters of a million sterling no more than about £E.6000 was added to the sanitary budget for the current year. Of this sum £E.2500 were devoted to increasing the number and improving the position of subordinate employés, £E.2000 to the street services of Cairo, and £E.1000 to hospital expenses. The number of admissions into the Government hospitals increases year by year. In 1893 there were 17,473 patients admitted; in 1903 the total number was 25,162. "This is satisfactory," says Lord Cromer, "in so far as it shows that the people are gaining confidence in the hospitals, whereas formerly not a single patient entered of his own free will. It is, however, very necessary to insist on the payment of fees for treatment, save in the case of the really indigent poor. No Government can afford to give medical treatment gratis to the larger portion of the population. ..... The principal function of government is the prevention of epidemic diseases, not the cure of persons suffering from ordinary maladies. The Egyptian Government is still far from being in a position to deal adequately with the former of these two questions." The views here enunciated by Lord Cromer are undeniable. Unless the budget of the sanitary department can be substantially increased it is to be feared that the inability of the Egyptian Government to deal adequately with epidemics of disease will long continue. Still, even as things are, a good deal has been done. "Egypt was entirely free from cholera during the whole of last year," continues Lord Cromer, "2118 cases of small-pox occurred, of which 394 were fatal; 406,856 successful vaccinations were performed, as against 377,421 in 1902. There was a good deal of diphtheria in Cairo during the autumn months. 286 deaths occurred, of which 15 were amongst Europeans. I am informed that whenever the children in the house where one case has occurred have been treated with anti-diphtheritic serum the disease has not spread. Plague appears to be diminishing; 303 cases were notified throughout Egypt, of which 160 were fatal, as against 481 cases and 291 deaths in 1902. The cases in 1903 occurred in the same towns and villages as those which suffered in 1902."

Of sanitary works in connexion with drainage or sewerage Lord Cromer makes no mention. The project for draining Cairo of which so much was heard some years ago seems to have been relegated to the Greek Kalends, and yet with diphtheria prevalent and a death-rate of 42·5 per 1000[1] it is evident that sewers are urgently required. With regard to water-supply, however, Lord Cromer is able to announce considerable progress not only in the capital and at Alexandria but also in several provincial towns. "It is with very special pleasure," he says, "that I am able to record that the Egyptian Government has at last

[1] Week ending Jan. 14th, 1904.

found itself in a position to embark seriously on the very wide field of sanitary reform. There could scarcely be any question as to the point which, more than all others, required attention. Experience has abundantly proved that public health depends in no small degree upon the purity of the drinking water supplied to the population." It cannot of course be denied that pure water is an excellent thing, but if water is laid on to a town there should also be provided some means for its removal when soiled. A water-supply is certain to be followed by water-closets which in the absence of sewers cannot be regarded as unmixed blessings. This is well exemplified in Cairo where the contents of innumerable water-closets are discharged into loose-bottomed cesspits situated among the foundations.

During the year with which Lord Cromer is dealing the resources of the sanitary department were severely tried by a serious outbreak of cattle plague. Sir Horace Pinching deals with the epizootic in a memorandum of which the full text is given in an appendix and which has been dealt with by our Egypt correspondent in THE LANCET of April 23rd, p. 1161. Referring to this document Lord Cromer says: "It cannot be doubted that the main difficulty in the way of dealing with an outbreak of this sort is to be found in the apathy and want of initiative amongst the people themselves. With rare exceptions the Egyptians, from the highest to the lowest, expect the Government to do everything for them. I do not doubt the correctness of Sir Horace Pinching's remarks on this subject. Every impartial person must applaud and sympathise with the efforts which he and others similarly situated are making to reform the Egyptians in spite of themselves, but it is hopeless to expect that national habits and characteristics which are the growth of centuries and the outcome of a long course of misgovernment can be altered in a hurry."

In illustration of "the almost universal tendency to shirk responsibility" which, together with corruption, is a "besetting sin" among Egyptian officials, Lord Cromer tells the following story. "I have heard of a doctor being sent to examine into the condition of a station-master supposed to be insane. On entering the room he was attacked and nearly strangled by the madman. He was able, after a sharp struggle, to call on two orderlies who had been present all the time to seize the man. They saluted and did so. On being asked why they had not interfered sooner they replied that they had received no orders to that effect. Without doubt they considered that the struggle on the floor which they had witnessed was part of some strange European process, with which they were unfamiliar, for dealing with insane station-masters."

THE SANITARY STATE OF MADEIRA.

IN view of a recent rumour that typhoid fever was prevalent in Funchal we have made inquiries and are able to publish the following from the pen of a well-informed correspondent:

During the last autumn months of September and October there was a considerable prevalence of typhoid fever in Madeira, mainly amongst the lower classes of the Portuguese people in the crowded eastern side of the city but the cases had already subsided when I returned from London in November. The latest returns covering the month of March give only five fatal cases in the district of Funchal, embracing a population of 145,000 persons. If there are added 20 odd cases returned as diarrhœa in the official list—and these lists are now more accurately kept than formerly—it will be seen that no outbreak has happened which can be termed epidemic in character.

During the last six months there have been 12 cases amongst the thousand or so of visitors and residents of our own people but no deaths have occurred. The hygiene of Madeira is undoubtedly primitive and defective and we are urging the authorities to develop promptly those elementary matters of mountain water-supply and town draining which are first considerations in the equipment of the meanest health resort. I have done my best in this direction and quite recently I went to Lisbon and succeeded in persuading the Lisbon Cortes to pass an Act allocating a large annual sum of money to be spent on hygienic reform in Madeira and I have every hope of seeing this work of water-supply and drainage accomplished before the termination of my long career in this island. The house drinking water is supplied mainly from a deep source in the centre of the district; this is of unquestioned purity and no case or outbreak of typhoid fever has ever been reported from the numberless steamers crowded with passengers which touch and draw their supplies at this port. In the hotels and quintas the drinking water is taken from the same source, but for baths and other domestic purposes mountain water is used which is brought in open channels subject to pollution from the human habitations in its course. In the hotels this is pasteurised in bulk and rendered safe; but it is this supply of two qualities of water which I trust shortly to see superseded by an adequate supply from a mountain district far beyond the contamination of human contact. The plans are all ready and elaborately drawn out and the money, as I have stated, has been voted.

It is impossible to over-estimate the importance of this health station and the absolute necessity of bringing the sanitary conditions up to date. We are now hardly more than three and a half days distant from England and the finest steamers almost daily call here and hundreds of our countrymen land, spend their money, and pass a few hours in exploring the mountain scenery and the surprising garden growths of a sub-tropical region. About 2000 steamers—most of them British—now call annually and land their passengers and take their supplies from Madeira; important industries have developed and the perishable produce of the land is conveyed to distant and less favoured countries with immense advantage to the people and the government of Portugal. In return we expect, as a matter of protection, merely the development of the elementary conditions of modern salubrity.

For two years there has been a serious want of rain in Madeira. We have had far too much fine bright weather and sunshine—agreeable enough to visitors but detrimental to the general interest.

April 7th.

ASYLUM REPORTS.

Ayr District Asylum (Report for the period April 1st, 1902, to Dec. 31st, 1903).—The average number of patients resident during the period was 515, comprising 245 males and 270 females. The admissions during the period amounted to 248—viz., 131 males and 117 females. Excluding from these 31 old-standing cases representing an artificial influx of already confirmed and registered pauper lunatics, the direct admissions were 212. Of these 187 were first admissions. Dr. C. C. Easterbrook, the medical superintendent, states in his report that among the admissions 33 were over the age of 60 years and that the mean age on admission was 45 years. A family history of insanity was traceable in 63 cases, of tuberculosis in 26 cases, of alcoholism in 14 cases, and of nervous diseases in 19 cases. Previous attacks of insanity occurred in 81 cases, while a "nervous" constitution or attacks of epilepsy and hysteria had occurred in 50 persons. The varieties of insanity present in the admissions were alcoholic insanity in 58 cases, senile insanity in 32, adolescent insanity in 36, climacteric insanity in 18, insanity of lactation and the puerperium in 12, and the insanities of inherent insane constitution (recurrent insanity, hypochondriacal insanity, and paranoia) in 12. General paralysis was met with in nine cases. Suicidal and homicidal tendencies were exhibited by at least 67 persons, 35 of whom had made suicidal and 32 homicidal attempts. The prospect as to mental recovery was doubtful in 83 cases and bad in 30. From the data collected, says Dr. Easterbrook, "there are two main lessons to be learned as to the production of insanity in the county. ... These are the potency of alcoholism and the influence of the crises of life." Alcoholism was present as a hereditary factor in 14 instances and as a personal factor in 58 cases. "These 58 cases do not include other 24 persons in whom alcoholism was present as a symptom of the insanity. I have most carefully excluded such cases, wishing to get at the real facts if possible. Further, I have excluded three cases in which I regarded alcoholism as a contributory factor only. ..... This left 55 alcoholic patients in whom the diagnosis of alcoholic insanity was based not merely on the history of the patient's habits but also on the character of the symptoms present, mental and bodily." These 55 cases out of 212 direct admissions represent a proportion of alcoholic insanity of 25·9 per cent., "which, so far

as I know, is not exceeded in any other county asylum in Scotland." The evil is thus widespread, but the remedy is less obvious, says Dr. Easterbrook who further suggests perpetual sequestration in "colonies"—islands for choice—for habitual inebriates, criminals, and degenerates who could thus "propagate neither their kind nor their influence and where all should be made to work for their maintenance." The number of cases discharged as recovered during the year amounted to 93, or 19 per cent. of the average number resident. The deaths during the year amounted to 89, or 17 per cent. as calculated on the same basis. Of the deaths three were due to senile decay, ten to pneumonia, 11 to general paralysis, 14 to cardiac disease, 14 to pulmonary and other forms of tuberculosis, and the rest to other causes. The Commissioners in Lunacy state in their report that the condition of the patients was in every respect satisfactory, that the clothing was neat and good, that the asylum was throughout in good order and scrupulously clean, that the day rooms were comfortably furnished, and that the medical case books were correctly and well kept.

Barnwood House Hospital for the Insane, Gloucester (Annual Report for 1903).—The average number of patients resident during the year was 144, comprising 61 males and 83 females. The admissions during the year amounted to 35—viz., 11 males and 24 females. Of these 31 were first admissions. Dr. James G. Soutar, the medical superintendent, states in his report that during the year one man was admitted as a boarder but he left unimproved within a fortnight. Two women were admitted as boarders; one of these had to be placed under certificates and the other recovered but continued in residence longer. Only cases of acute and curable insanity "and those chronic cases who were likely to appreciate or be influenced by their surroundings" were accepted for admission. Among the causes of mental disorder in the admissions hereditary predisposition occupied a prominent place, being ascertained to be present in 40 per cent. of cases. The number of patients discharged as recovered during the year amounted to 19—viz., six males and 13 females, or 13·2 per cent. of the average number resident. The deaths during the year amounted to eight, or 5·6 per cent. as calculated on the same basis. Of the deaths one each was due to general paralysis of the insane, pulmonary tuberculosis, strangulated hernia, and injury on a railway, and two each were due to bronchitis and to cardiac disease. "It is agreed that efficient treatment in the early stage of insanity is that which beyond everything else gives the patient the best chance of recovery and our statistics for the year emphasise this point. Of those who recovered nine had on admission been ill for one week or less, seven had on admission been ill for more than one week but less than one month, and one had been ill for more than a month but less than two months." The health of the inmates was good during the year and there were no cases of epidemic disorder. The Commissioners in Lunacy state in their report that all parts of the building were found to be in good order, that there was no restraint or seclusion, that the patients appeared contented and well cared for, and that the medical case-books were well kept. The committee of management states in its report that "the hospital buildings, both as regards structure and decoration, the character of the establishment, the amusements, comforts, and luxuries provided for the patients, are all planned so as to conduce to the speedy recovery of the curable cases," so that their provision and maintenance have been, and continue to be, very costly. To further this end the committee has during the past five years discharged many patients whose condition seemed incapable of amelioration and it has also refused to admit many others who apparently belonged to the same unfavourable class. The committee has thus gradually reduced the number of chronic and incurable cases in the hospital within a reasonable time.

MEDICINE AND THE LAW.

The Definition of an "Accident."

IT is a matter of some importance to a medical man when he is called in to attend a working man to know whether the condition in which he finds him, the causes of that condition, and the treatment prescribed are likely to form the subjects of investigation in a court of law. Consequently recent decisions enlarging and defining the meaning of the word "accident" as used in the Workmen's Compensation Act, 1897, are of interest to members of the medical profession who may have to figure as witnesses as well as to their patients. Moreover, the signification and uses of words of frequent occurrence in the English language must always be worthy of the consideration of educated persons whose native tongue it is and who are in a position to form their own opinions upon the question under discussion. The phrase in the Act concerning which doubt has arisen is that which makes the employer liable to pay compensation to his workman for "personal injury by accident arising out of, and in the course of, the employment." It will be seen that not only must the personal injury be due to an "accident" but also that the accident must arise out of, as well as in the course of, the employment. A large number of occurrences causing injury to workmen fulfil these conditions so plainly that dispute cannot arise. With others, however, it is different. Frequently a workman becomes disabled although no outward fortuitous event such as is often associated with the word "accident" has taken place. Sometimes he has deliberately encountered excessive strain, as for example in lifting a heavy weight, and a hernia or other serious injury or the aggravation of existing injury has been the result. On such occasions medical evidence is necessary in order to explain the injury and to connect it with the workman's employment, but the question whether it has been "accidental" is a matter for judicial interpretation. The Act uses the word "accident" but does not define it. There were conflicting decisions upon the subject until the case of Hensey *v.* White was heard by the Court of Appeal in 1899. This and others which followed the precedent laid down in it may be said to have decided that where the work performed presented nothing fortuitous or unforeseen there was no accident. As an instance of these decisions may be cited the case of Roper *v.* Greenwood (83 Law Times, N.S., 471) in which a woman engaged upon the manufacture of wooden boxes had to turn and to move some heavier than those which she usually handled. Having lifted several with effort but without apparent ill-effect to herself she essayed another but complained at once of injury and was found to be suffering from prolapsus uteri induced by her exertions. This was held by the Court of Appeal not to have been an "accident" such as would entitle the woman to compensation. This case, with Hensey *v.* White and others of the same class, were overruled by the House of Lords in another (Fenton *v.* Thorley, 1903, A. C. 443) which may be described as a typical instance of over-exertion in the ordinary course of work. The workman had to raise the lid of a large vessel by turning a wheel. The wheel worked stiffly, he called a fellow workman and while they were endeavouring to move it felt "a tear in his inside" which proved to be a hernia and for which he claimed compensation. This was refused by the county-court judge whose view was upheld by the Court of Appeal following the decisions referred to. The House of Lords, however, unanimously decided that the Court of Appeal and the previous decisions were wrong and that the workman should be compensated as for an "accident." This word Lord Macnaghten considered to be used in the Act "in the popular and ordinary sense of the word as denoting an unlooked-for mishap or an untoward event which is not expected or designed." Lord Robertson spoke of the word being used to denote "any unintended and unexpected loss or hurt apart from its cause." The result has been that the workman does not now have to adduce proof of an unforeseen incident external to himself and arising out of his work in order to be compensated. He can claim in respect of those results of physical strain of which a willing worker must at times run the risk but the actual occurrence of which neither he nor anyone else can predict. This decision appears to be one in accord with the spirit of the statute and it is one which naturally has brought others in its train. In December, 1903, two cases came before the Court of Appeal in which the workmen had suffered from anthrax contracted in wool factories. Two county-court judges had given contrary decisions, one of them holding that the infection constituted an accident and the other refusing so to regard it. The Court of Appeal declaring the matter to be governed by Fenton *v.* Thorley had no doubt that according to that judgment infection with anthrax was an accident arising out of the workmen's employment. How far the possibilities thus suggested may be extended in the future remains to be seen. It was said by the county-court judge who refused to treat anthrax as an "accident"

that if infection with disease was to be so regarded then a workman who caught scarlet fever from one of his fellows would be able to claim compensation from his employer and it is by no means impossible that some day claims of this kind may be attempted. Yet a third case of doubtful "accident" was more recently heard by the Court of Appeal in which, however, the question turned principally upon whether the occurrence arose "out of" the employment. In this (Andrew *v.* Failsworth Industrial Society, Limited) judgment was given on April 13th. The man whose relatives applied for compensation was employed upon a building which complied with the requirements of the Workmen's Compensation Act in being above 30 feet in height and he was working at a point 23 feet above the ground when he and a fellow workman were struck and killed by a flash of lightning. The expert evidence dwelt upon the danger arising from the height above surrounding objects, upon the effect of wet, and upon the fact that the man would afford a well defined point at which a discharge might occur. The increase of danger owing to elevation was thus defined: "If you draw a line at an angle of 45 degrees from the highest point of an erection to the earth persons within the cone are protected and it is therefore clear that as you ascend the zone of safety diminishes." The county-court judge held that there was a right to recover for an "accident arising out of the employment" and the Court of Appeal confirmed his decision. It will be seen that the trend of these later judgments is towards widening rather than towards narrowing the scope of the Acts in question and that they are likely to make employers careful of the safety of their workmen in matters with regard to which they could before afford to be indifferent. They will also increase the number of occasions upon which medical evidence will be required.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8789 births and 4697 deaths were registered during the week ending April 23rd. The annual rate of mortality in these towns, which had been 18·7, 18·4, and 17·6 per 1000 in the three preceding weeks, further declined last week to 16·0 per 1000. In London also the death-rate was 16·0 per 1000 and was equal to the average rate in the 75 other large towns. The lowest death-rates in these towns were 5·1 in Willesden, 7·0 in Handsworth (Staffs.), 7·1 in Hastings, 7·3 in Newport (Mon.), 7·7 in Hornsey, 8·5 in Leyton, and 9·7 in Tottenham and in Devonport; while the highest rates were 20·6 in Oldham, 20·7 in Sunderland, 20·9 in Birkenhead, 21·8 in Burnley, 22·0 in Manchester, 22·4 in Birmingham and in St. Helens, and 25·6 in Warrington. The 4697 deaths in these towns last week included 556 which were referred to the principal infectious diseases, against 640, 583, and 530 in the three preceding weeks; of these 556 deaths 215 resulted from whooping-cough, 199 from measles, 44 from diarrhœa, 42 from diphtheria, 34 from scarlet fever, 16 from "fever" (principally enteric), and six from small-pox. No death from any of these diseases was registered last week in Hastings, Bournemouth, Southampton, Northampton, Devonport, Burton-on-Trent, Handsworth (Staffs.), Smethwick, Wigan, South Shields, or Newport (Mon.); among the other towns the highest death-rates from the principal infectious diseases were recorded in Walthamstow, Birmingham, Wallasey, Bootle, St. Helens, Warrington, Manchester, Salford, Burnley, Huddersfield, and Rhondda. The greatest proportional mortality from measles occurred in Hornsey, West Ham, Walthamstow, Brighton, Norwich, Wallasey, St. Helens, Burnley, Huddersfield, and Rhondda; from scarlet fever in Warrington; and from whooping-cough in Walsall, Birmingham, Leicester, Birkenhead, Wallasey, Bootle, Warrington, West Hartlepool, and Swansea. The mortality from diphtheria, from "fever," and from diarrhœa was not excessive in any of the large towns. Of the six fatal cases of small-pox registered in these towns last week two belonged to Manchester and one each to London, Nottingham, Gateshead, and Tynemouth. The number of small-pox cases remaining under treatment in the Metropolitan Asylums hospitals, which had been 126, 134, and 144 on the three preceding Saturdays, had declined again to 123 on Saturday last, April 23rd; 23 new cases were admitted during the week, against 42, 25, and 37 in the three preceding weeks. The number of scarlet fever patients in these hospitals and in the London Fever Hospital at the end of last week was 1543, against 1570, 1505, and 1523 at the end of the three preceding weeks; 210 new cases were admitted during the week, against 153, 141, and 172 in the three preceding weeks. The deaths in London referred to pneumonia and diseases of the respiratory system, which had been 370, 333, and 295 in the three preceding weeks, further declined last week to 254 and were 29 below the number in the corresponding period of last year. The causes of 47, or 1·0 per cent., of the deaths in the 76 towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Leicester, Bradford, Leeds, Hull, Newcastle-on-Tyne, and in 45 other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Liverpool, Manchester, Blackburn, Rotherham, and South Shields.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 20·6, 20·3, and 20·9 per 1000 in the three preceding weeks, further rose to 21·0 per 1000 during the week ending April 23rd and was 5·0 per 1000 in excess of the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns ranged from 11·0 in Leith and 17·8 in Edinburgh to 25·8 in Dundee and 26·2 in Perth. The 695 deaths in these towns included 29 from whooping-cough, 26 from measles, 11 from diarrhœa, five from "fever," four from scarlet fever, three from small-pox, and one from diphtheria. In all, 79 deaths resulted from these principal infectious diseases last week, against 72, 57, and 65 in the three preceding weeks. These 79 deaths were equal to an annual rate of 2·4 per 1000, which was 0·5 per 1000 in excess of the mean rate last week from the same diseases in the 76 large English towns. The fatal cases of whooping-cough, which had been 23, 19, and 20 in the three preceding weeks, rose again last week to 29, of which seven were registered in Glasgow, seven in Aberdeen, six in Edinburgh, five in Dundee, and two in Greenock. The deaths from measles, which had been 23, 14, and 21 in the three preceding weeks, further rose to 26 last week and included 19 in Glasgow, three in Edinburgh, and three in Dundee. The fatal cases of diarrhœa, which had been nine, seven, and 15 in the three preceding weeks, declined again last week to 11, of which six occurred in Glasgow, and three in Dundee. The deaths referred to different forms of "fever," which had been four, three, and four in the three preceding weeks, further rose to five last week and included three in Glasgow. The fatal cases of scarlet fever, which had been five, two, and one in the three preceding weeks, rose again last week to four, of which three were recorded in Glasgow. The deaths from small-pox, which had been five, seven, and three in the three preceding weeks, were again three last week, and included two in Glasgow and one in Greenock. The deaths referred to diseases of the respiratory organs in these towns, which had been 157, 138, and 152 in the three preceding weeks, declined again last week to 115, and were 14 below the number in the corresponding period of last year. The causes of 20, or nearly 3 per cent., of the deaths registered in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 28·5, 29·7, and 24·4 per 1000 in the three preceding weeks, further declined to 23·3 per 1000 during the week ending April 23rd. During the past four weeks the death-rate has averaged 26·5 per 1000, the rates during the same period being 17·5 in London and 18·9 in Edinburgh. The 169 deaths of persons belonging to Dublin registered during the week under notice showed a decline of eight from the number in the preceding week and included ten which were referred to the principal infectious diseases, against 20, 19, and 17 in the three preceding weeks; of these, five resulted from whooping-cough, three from measles, one from diphtheria, and one from diarrhœa, but not any from small-pox, from scarlet fever, or from "fever." These ten deaths were equal to an annual rate of 1·4 per 1000, the death-rates last week from the principal infectious

ANALYSIS OF SICKNESS AND MORTALITY STATISTICS IN LONDON DURING MARCH, 1904.

(Specially compiled for THE LANCET.)

CITIES AND BOROUGHS.	Estimated population in the middle of 1904.	NOTIFIED CASES OF INFECTIOUS DISEASE.											DEATHS FROM PRINCIPAL INFECTIOUS DISEASES.											Deaths from all causes.	Death-rate per 1000 living.	Deaths of infants under one year to 1000 births.
		Small-pox.	Scarlet fever.	Diphtheria.*	Typhus fever.	Enteric fever.	Other continued fevers.	Puerperal fever.	Erysipelas.	Cholera.	Total.	Annual rate per 1000 persons living.	Small-pox.	Measles.	Scarlet fever.	Diphtheria.*	Whooping-cough.	Typhus fever.	Enteric fever.	Other continued fevers.	Diarrhœa.	Total.	Annual rate per 1000 persons living.			
LONDON	4,649,088	143	925	560	—	116	—	35	372	—	2181	4·9	6	337	21	85	270	—	14	—	2	825	1·9	8158	18·3	143
West Districts.																										
Paddington	146,975	1	24	12	—	2	—	2	9	—	50	3·5	—	13	1	4	4	—	—	—	2	24	1·7	236	16·7	167
Kensington	179,236	—	28	16	—	3	—	2	16	—	65	3·8	—	18	—	2	2	—	—	—	8	30	1·7	308	18·0	149
Hammersmith	117,412	—	16	10	—	6	—	—	8	—	40	3·6	—	43	—	—	3	—	1	—	2	49	4·4	239	21·2	191
Fulham	152,482	—	18	26	—	3	—	2	9	—	58	4·0	—	10	—	2	10	—	—	—	4	26	1·8	215	14·7	149
Chelsea	74,329	—	11	6	—	—	—	—	3	—	20	2·8	—	6	—	1	4	—	—	—	1	12	1·7	139	19·5	162
City of Westminster	177,321	—	20	10	—	7	—	—	9	—	46	2·7	—	7	1	—	2	—	1	—	1	12	0·7	278	16·3	126
North Districts.																										
St. Marylebone	130,337	2	19	5	—	1	—	1	14	—	42	3·2	—	8	1	1	1	—	—	—	2	13	1·0	243	19·4	97
Hampstead	86,663	—	9	3	—	2	—	1	8	—	23	2·8	—	1	—	—	1	—	—	—	1	3	0·4	89	10·7	103
St. Pancras	235,936	—	78	43	—	5	—	2	19	—	147	6·5	—	32	4	3	14	—	—	—	4	57	2·5	476	21·0	159
Islington	341,044	3	48	31	—	6	—	1	13	—	102	3·1	—	15	—	3	14	—	—	—	5	37	1·1	565	17·3	109
Stoke Newington	62,445	—	8	1	—	—	—	—	3	—	12	2·4	—	—	—	—	2	—	—	—	—	2	0·4	69	13·7	115
Hackney	226,366	4	56	30	—	5	—	3	28	—	176	8·1	—	3	—	7	12	—	2	—	2	26	1·2	341	15·7	120
Central Districts.																										
Holborn	57,161	2	8	4	—	5	—	2	5	—	26	4·7	1	11	—	—	—	—	—	—	1	13	2·4	129	23·5	147
Finsbury	98,958	1	27	9	—	—	—	—	3	—	40	4·2	—	3	1	1	5	—	—	—	2	12	1·3	220	23·2	153
City of London	23,482	1	—	2	—	3	—	—	2	—	8	3·6	—	—	—	—	2	—	—	—	—	2	0·9	53	23·5	128
East Districts.																										
Shoreditch	117,033	—	21	7	—		—	—	9	—	45	4·0	—	8	1	2	16	—	—	—	3	30	2·7	228	20·3	182
Bethnal Green	130,207	45	30	35	—	6	—	2	15	—	133	10·7	4	3	2	7	4	—	1	—	2	23	1·8	244	19·5	130
Stepney	303,791	42	32	45	—		—	1	27	—	204	7·0	—	26	2	10	38	—	1	—	11	88	3·0	630	21·6	167
Poplar	169,905	24	36	55	—	4	—	2	16	—	137	8·4	1	14	1	15	20	—	—	—	5	56	3·4	384	23·6	154
South Districts.																										
Southwark	207,937	8	41	22	—	6	—	2	20	—	99	5·0	—	41	—	5	12	—	3	—	5	66	3·3	464	23·3	183
Bermondsey	129,397	1	32	25	—	3	—	1	16	—	78	6·3	—	13	4	1	17	—	—	—	4	39	3·1	262	21·1	151
Lambeth	310,359	4	41	31	—	6	—	1	23	—	106	3·6	—	15	1	5	12	—	2	—	8	43	1·4	548	18·4	133
Battersea	175,465	3	23	16	—	5	—	1	17	—	64	3·8	—	7	1	2	20	—	1	—	5	36	2·1	293	17·4	167
Wandsworth	257,586	—	61	23	—	6	—	2	22	—	114	4·6	—	4	—	5	7	—	—	—	3	19	0·8	378	15·3	114
Camberwell	268,384	2	77	24	—	3	—	1	23	—	130	5·1	—	21	—	5	14	—	1	—	4	45	1·7	440	17·1	146
Deptford	113,509	—	33	8	—	—	—	3	9	—	53	4·9	—	7	1	—	10	—	—	—	1	19	1·7	193	17·7	107
Greenwich	101,651	—	13	16	—	9	—	—	9	—	47	4·8	—	3	—	2	12	—	1	—	1	19	1·9	157	16·1	160
Lewisham	140,401	—	25	14	—	1	—	1	9	—	50	3·7	—	3	—	1	7	—	—	—	2	13	1·0	168	12·5	122
Woolwich	123,416	—	41	11	—	4	—	2	7	—	65	5·5	—	2	—	1	5	—	—	—	3	11	0·9	169	14·3	110
Port of London	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

* Including membranous croup.

diseases being 1·8 in London and 1·7 in Edinburgh. The fatal cases of measles, which had been four in each of the three preceding weeks, declined last week to three. The five deaths from whooping-cough showed a decline of six from the number in the preceding week. The 169 deaths in Dublin last week included 29 of children under one year of age and 46 of persons aged 60 years and upwards; the deaths of infants showed a considerable decline, while those of elderly persons were slightly in excess of the number in the preceding week. Seven inquest cases and four deaths from violence were registered, and 67, or nearly two-fifths, of the deaths occurred in public institutions. The causes of seven, or more than 4 per cent., of the deaths registered in Dublin last week were not certified.

VITAL STATISTICS OF LONDON DURING MARCH, 1904.

IN the accompanying table will be found summarised complete statistics relating to sickness and mortality in the City of London and in each of the metropolitan boroughs. With regard to the notified cases of infectious diseases it appears that the number of persons reported to be suffering from one or other of the nine diseases specified in the table was equal to an annual rate of 4·9 per 1000 of the population, estimated to be 4,649,088 persons in the middle of the year. In the three preceding months the rates had been 5·4, 5·1, and 4·8 per 1000 respectively. The rates were considerably below the average in Chelsea, the City of Westminster, Hampstead, Islington, and Stoke Newington; while they showed the largest excess in St. Pancras, Hackney, Bethnal Green, Stepney, Poplar, and Bermondsey. The prevalence of small-pox during March showed a very marked increase as compared with that recorded in other recent months; the greatest proportional prevalence of this disease was recorded in Hackney, Holborn, Bethnal Green, Stepney, Poplar, Southwark, and Battersea. The Metropolitan Asylums hospitals contained 126 small-pox patients at the end of last month, against 26, 21, and 31 at the end of the three preceding months; the weekly admissions averaged 31, against four, four, and six in the three preceding months. Scarlet fever was proportionally more prevalent last month than it had been during the preceding month. Among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in St. Pancras, Finsbury, Stepney, Camberwell, Deptford, and Woolwich. The number of scarlet fever patients under treatment in the Metropolitan Asylums hospitals, which had been 1606, 1626, and 1560 at the end of the three preceding months, had further declined to 1546 at the end of last month; the weekly admissions averaged 160, against 168, 182, and 153 in the three preceding months. The prevalence of diphtheria, which had shown no appreciable variation during the four preceding months, had slightly decreased during March; this disease was proportionally most prevalent in St. Pancras, Hackney, Bethnal Green, Poplar, and Bermondsey. The Metropolitan Asylums hospitals contained 786 diphtheria patients at the end of last month, against 734, 752, and 782 at the end of the three preceding months; the weekly admissions averaged 94, against 104, 97, and 107 in the three preceding months. Enteric fever, which had shown a declining prevalence in the three preceding months, further diminished last month; among the various metropolitan boroughs the greatest proportional prevalence of this disease occurred in Hammersmith, Holborn, the City of London, Shoreditch, Bethnal Green, and Greenwich. The number of enteric fever patients in the Metropolitan Asylums hospitals, which had been 216, 166, and 125 at the end of the three preceding months, had further decreased to 86 at the end of last month; the weekly admissions averaged 11, against 30, 16, and 15 in the three preceding months. Erysipelas was proportionally most prevalent in St. Marylebone, Hackney, Bethnal Green, Southwark, Bermondsey, and Battersea. The 35 cases of puerperal fever notified during the month included three in Hackney and in Deptford, and two each in Paddington, Kensington, Fulham, St. Pancras, Holborn, Bethnal Green, Poplar, Southwark, Wandsworth, and Woolwich.

The mortality statistics in the table relate to the deaths of persons actually belonging to the various boroughs, the deaths occurring in public institutions having been distributed among the boroughs in which the deceased persons had previously resided. During the five weeks ending April 2nd the deaths of 8158 persons belonging to London were registered, equal to an annual rate of 18·3 per 1000; in the three preceding months the rates had been 17·2, 18·2, and 16·7 per 1000. The lowest death-rates in London last month were 10·7 in Hampstead, 12·5 in Lewisham, 13·7 in Stoke Newington, 14·3 in Woolwich, 14·7 in Fulham, 15·3 in Wandsworth, and 15·7 in Hackney; while the highest rates were 21·6 in Stepney, 23·2 in Finsbury, 23·3 in Southwark, 23·5 in Holborn and in the City of London, and 23·6 in Poplar. The 8158 deaths from all causes in London last month included 825 which were referred to the principal infectious diseases; of these, six resulted from small-pox, 337 from measles, 21 from scarlet fever, 85 from diphtheria, 270 from whooping-cough, 14 from enteric fever, and 92 from diarrhœa. The lowest death-rates from these diseases were recorded in the City of Westminster, Hampstead, Stoke Newington, the City of London, Wandsworth, and Woolwich; while they caused the highest death-rates in Hammersmith, Shoreditch, Stepney, Poplar, Southwark, and Bermondsey. Of the six fatal cases of small-pox registered last month four belonged to Bethnal Green and one each to Holborn and Poplar. The 337 deaths from measles were slightly in excess of the average number in the corresponding periods of the ten preceding years, 1894–1903; among the various metropolitan boroughs this disease was proportionally most fatal in Kensington, Hammersmith, St. Pancras, Holborn, Southwark, and Bermondsey. There were only 21 fatal cases of scarlet fever last month, against an average of 54 in the corresponding periods of the ten preceding years; of these 21 deaths, four occurred in St. Pancras, four in Bermondsey, two in Bethnal Green, and two in Stepney. The 85 fatal cases of diphtheria showed a decrease of 100 from the corrected average number; this disease was proportionally most fatal in Paddington, Hackney, Bethnal Green, Stepney, Poplar, and Southwark. The 270 deaths from whooping-cough were slightly below the average number in the corresponding periods of the ten preceding years; among the various metropolitan boroughs the greatest proportional mortality from whooping-cough was recorded in Shoreditch, Stepney, Poplar, Bermondsey, Battersea, and Greenwich. The fatal cases of enteric fever numbered 14 last month, against an average of 41 in the corrresponding periods of the ten preceding years; three cases belonged to Southwark and two each to Hackney and Lambeth. The 92 deaths from diarrhœa were 27 in excess of the corrected average number; this disease was proportionally most fatal in Kensington, Fulham, Shoreditch, Stepney, Poplar, Bermondsey, and Battersea. In conclusion, it may be stated that the aggregate mortality in London last month from these principal infectious diseases was nearly 17 per cent. below the average.

Infant mortality, measured by the proportion of deaths among children under one year of age to registered births, was equal to 143 per 1000. The lowest rates of infant mortality were recorded in St. Marylebone, Hampstead, Islington, Wandsworth, Deptford, and Woolwich; and the highest rates in Paddington, Hammersmith, Shoreditch, Stepney, Southwark, and Battersea.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: P. E. Maitland to the *Caledonia* and G. T. Broatch to the *Challenger*. Staff Surgeon C. M. Beadnell to the *Erebus*. Surgeon W. P. Yetts to the *Challenger*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel F. B. Maclean takes over charge of the troops and Station Hospital at Canterbury. Major W. E. Hardy is posted to the Station Hospital, Shorncliffe, for duty. Lieutenant-Colonel R. H. Moore and Major H. N. Thompson, D.S.O., join at Aldershot for duty and are posted to the Cambridge Hospital.

The following officers have been appointed to the command of station hospitals for the summer season: Captain Powell, Lower Topa; Captain J. F. Martin, Upper Topa; Captain W. Beyts, Solan; Major G. T. Rawnsley, Kuldannah; Captain E. W. Siberry, Thobba; Captain P. McKessack, Khanspur and Ghora Dakka; Lieutenant P. Davidson, Kalabagh; Major C. J. Holmes, Cherat; and Lieutenant S. M. W. Meadows, Khaira Gali.

Lieutenant-Colonel John Hoysted (retired) has been selected for duty with troops and appointed to Norwich.

The undermentioned Lieutenants, from the Seconded List, to be Lieutenants (dated April 5th, 1904): R. M. Ranking and F. H. Noke. Lieutenant G. W. G. Hughes is seconded for service with the Egyptian Army (dated April 7th, 1904). Lieutenant G. W. Smith resigns his commission (dated April 23rd, 1904).

ROYAL ARMY MEDICAL CORPS (MILITIA).

2nd South Eastern District Company: Lieutenant H. V. Craster resigns his commission (dated April 23rd, 1904).

IMPERIAL YEOMANRY.

Derbyshire: Surgeon-Lieutenant R. M. Wilson to be Surgeon-Captain (dated April 23rd, 1904). The North of Ireland: Edward Charles Thompson to be Surgeon-Major (dated April 16th, 1904).

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Captain D. Todd to be Surgeon-Major (dated April 13th, 1904).

VOLUNTEER CORPS.

Rifle: 1st Bucks: Brigade-Surgeon-Lieutenant-Colonel W. H. Bull is seconded whilst holding the appointment of Senior Medical Officer of the Home Counties Volunteer Infantry Brigade (dated April 23rd, 1904). 2nd Volunteer Battalion the Loyal North Lancashire Regiment: The undermentioned gentlemen to be Surgeon-Lieutenants:—James Wood (dated April 23rd, 1904) and Frank Robinson (dated April 23rd, 1904).

ROYAL ARMY MEDICAL CORPS (VOLUNTEERS).

The London Companies: The following is substituted for that which appeared in the *London Gazette* of April 15th:—Major V. Matthews to be Lieutenant-Colonel and to command under paragraph 55A Volunteer Regulations (dated April 9th, 1904).

VOLUNTEER OFFICERS' DECORATION.

The King has conferred the Volunteer Officers' Decoration upon the undermentioned officer of the Volunteer force:—*Scottish District: Rifle:* 1st (Inverness-shire Highland) Volunteer Battalion the Queen's Own Cameron Highlanders: Brigade-Surgeon-Lieutenant-Colonel Ogilvie Grant, retired.

SCOTTISH VOLUNTEER AMBULANCE TROPHY.

The first annual competition for the new ambulance trophy presented by the Scottish Volunteer Medical Officers' Association will take place at the headquarters of the 1st L.R.V., West Prince-street, Glasgow, on Saturday, May 14th, at one o'clock. The need of a Scottish competition has arisen from the obvious difficulties which prevent many teams presenting themselves in London for examination in the already existing national competition. The trophy is valued at 300 guineas and the examiners appointed are Lieutenant-Colonel R. J. Geddes, D.S.O., R.A.M.C., Major C. C. Fleming, D.S.O., R.A.M.C., Brigade-Surgeon-Lieutenant Colonel A. D. Webster, 1st L.V.I., Edinburgh, Surgeon-Lieutenant-Colonel A. Napier, 3rd L.R.V., Glasgow, Honorary Staff-Surgeon J. McIntyre, R.N.V.R., Surgeon-Major J. Mill, A.M.R., Leith, and Major McGregor Robertson, R.A.M.C.V., Glasgow. The competing teams represent practically all branches of the volunteer services and hail from as far north as Inverness. The competition will be presided over by Director-General Sir William Taylor, in the presence of Colonel the Marquis of Breadalbane and the Marquis of Graham, commanding officer of the Clyde Division of the Naval Volunteers. Lord Provost Sir John and Lady Primrose also intend to be present and the winning team will have the trophy handed to it by her Grace the Duchess of Montrose who has consented to perform this ceremony. The organisation of this competition has been largely the work of the honorary secretary of the association, Captain R. T. Halliday, R.A.M.C.V., Glasgow, who with Lieutenant Wright Thomson of the same corps is responsible for the general arrangements. On the same evening the annual dinner of the association will take place in the Windsor Hotel under the chairmanship of the President, Surgeon-Major Quintin Chalmers, H.L.I. Brigade Bearer Company, and Lord Breadalbane, Sir William Taylor, and Sir John Primrose will be the chief guests.

THE PROJECTED WAR OFFICE REFORM.

The Army Medical Service is not the only branch of the service affected by the new scheme set forth in the reports of Lord Esher's Reconstruction Committee. It is contended on the part of the Auxiliary Forces that the reversal by that committee of Mr. Brodrick's ruling that the office of the Inspector-General of these forces was to be a separate one under the Commander-in-Chief has altogether altered the basis of their position at the War Office. The Government, without waiting for the report of the Royal Commission on the Auxiliary Forces now sitting, has apparently adopted the arrangement recommended by Lord Esher's committee and the Auxiliary Forces are to be placed, as in the case of the Army Medical Service, under the adjutant-general as a branch of his office. This has naturally given rise to a good deal of difficulty and discussion. A correspondent of the *Standard*, in an able article on "War Office Reform" which appeared in that journal on April 25th, deals with the scheme which has been proposed by Lord Esher and his colleagues as a whole and from this article we extract the following remarks regarding the Army Medical Service:—

> The third part of the report contains, as the committee observe, no new principle but is descriptive and explanatory of the nature and duties of offices already created and of principles already accepted. A noticeable feature of it is the proposal to place the Army Medical Department under the Adjutant General. The position and status of the staff of this department have long been a source of trouble and friction. Under the Army Council system now inaugurated the head of the department must clearly either be on the Army Council as an extra military member or must "report to" one or other of the military members. For strong reasons the committee reject the first alternative and select the Adjutant-General as the natural superior of the medical staff. The staff of this department having only recently been elevated into a Royal corps and placed directly under the Commander-in-Chief it is to be feared that the change now proposed will not be altogether acceptable to this vitally important branch of the Service; but it is difficult to see what other alternative is compatible with the new organisation of the Military Departments of the War Office.

The writer of the article in question then goes on to say that a similar difficulty arises with regard to the Auxiliary Forces as to the position of their representative at the War Office.

VOLUNTEER AMBULANCE SCHOOL OF INSTRUCTION.

Surgeon-General Sir William Taylor, K.C.B., K.H.P., Director-General of the Army Medical Department, has accepted the invitation of Brigade Surgeon-Lieutenant-Colonel P. B. Giles and officers of the Volunteer Ambulance School of Instruction to be present at the annual dinner which will take place at the Trocadéro Restaurant, Piccadilly Circus, London, W., on Thursday, May 12th. Among others who have signified their intention of being present are: Sir Robert Ball, F.R.S., Mr. Jonathan Hutchinson, F.R.S., Colonel A. T. Sloggett, C.M.G., R.A.M.C., Colonel G. W. Robinson, R.A.M.C., Colonel E. M. Wilson, C.B., C.M.G., D.S.O., R.A.M.C., Colonel E. C. Stevenson, 3rd City of London V.R.C., and Dr. J. Galloway.

THE WAR IN THE FAR EAST.

The *Daily Graphic* says: "The services of Miss McGee, the American lady doctor who, with a staff of eight nurses, has volunteered to assist the Japanese medical staff at the front, have been accepted and the party has already arrived at Yokohama where they received a most cordial welcome. Miss McGee and her companions, after a short stay in the Japanese capital, will be detailed to a hospital ship."

Surgeon Francis F. Lobb, R.N., at present attached to the Plymouth division of the Royal Marine Light Infantry, has received the African general service medal, with clasp "Aro, 1901-1902." Colonel-Commandant A. D. Corbet, C.B., made the presentation at the morning parade at the Royal Marine Barracks, Stonehouse, on April 22nd.

GENERAL LYING-IN HOSPITAL, YORK-ROAD, LAMBETH, LONDON, S.E.—The entertainment referred to in THE LANCET of April 16th, p. 1047, has been postponed from May 26th until some time in the autumn, probably October, but the bazaar on July 8th and 9th will be held as announced.

THE MEDICAL DIPLOMATES SOCIETY OF LONDON.—At the last meeting of the London Licentiates and Members Society, which was held at 20, Hanover-square on April 19th, under the presidency of Dr. F. J. Smith, it was agreed to alter the name of the society to the Medical Diplomates Society of London.

Correspondence.

"Audi alteram partem."

ON SYPHONAGE IN THE LARGE INTESTINE.

To the Editors of THE LANCET.

SIRS,—May I point out to Dr. R. W. Leftwich that experiments worked out with a syphon of garden hose with glass insertions and treacle, fully described in his book, "prove" nothing as regards the action of the human colon and do not justify the treatment of patients as syphons. Before placing his patients in the upright posture to secure a syphonage effect he must first render the contents of the great intestine "capable of flowing" (which will be necessary in over 90 per cent. of cases); he must render the walls of the colon rigid, which can be done only by producing a negative pressure in the abdominal cavity, which can be done by inverting the patient. Rigidity cannot be produced by either the longitudinal or circular coat of the colon, the one shortens the bowel, the other diminishes its calibre, but neither can act in the opposite way, as Dr. Leftwich believes it can. A negative pressure in the cæcum is a product of Dr. Leftwich's imagination. The muscular coats are, as I have already shown, more than sufficient to propel the contents of the colon and readily hypertrophy when there is a localised obstruction to be overcome. As for the "daily morning evacuation" being the result of syphonage, how does Dr. Leftwich account for the fact that most domestic animals (especially noticeable amongst cows) always evacuate when they rise from a period of rest?

I am, Sirs, yours faithfully,

April 23rd, 1904. ARTHUR KEITH.

BILHARZIA HÆMATOBIA.

To the Editors of THE LANCET.

SIRS,—*Re* bilharzia hæmatobia, as I have been practising here for the last ten or 12 years and have necessarily, therefore, come in contact with very many cases of the above I take the liberty of answering Mr. E. H. Worth's question as regards treatment published in THE LANCET of Feb. 27th (p. 611). My experience leads me to believe that treatment has very little, if any, effect upon the course of the disease which in temperate persons is almost invariably mild and favourable. Iron alum is, I think, the best iron preparation if the hæmaturia is excessive, or the tinctura ferri perchloridi, while for the burning at the meatus during micturition my favourite drug is potassium citrate, which also presumably assists in preventing the formation of calculi. These last are occasionally a troublesome complication but are, in my experience, invariably of small size and are only brought under the notice of the practitioner by becoming impacted in the urethra or by causing an attack of renal colic.

I am, Sirs, yours faithfully,

F. T. AUDEN, M.D. Edin.

Rustenburg, Transvaal, March 26th, 1904.

A PROBABLE FRACTURE OF THE BASE OF THE SKULL WITH RECOVERY.

To the Editors of THE LANCET.

SIRS,—The following case may be of some interest. The accident occurred to a friend of mine who was coasting down a steep hill on his bicycle when, owing to a sudden swerve while he was going very fast, he collided with a wooden fence, completely injuring the front wheel and forks and also receiving a cut over the right parietal eminence from which there was considerable hæmorrhage. He was slightly unconscious for a few moments but managed with slight assistance to walk afterwards. Later there were some hæmorrhage from the right external meatus and considerable pain about the right tympanum when coughing or blowing his nose, also complete loss of hearing by the right ear and a considerable amount of blood came from the nose when it was blown. This condition continued for about 12 hours and then the hæmorrhage ceased but for three days the patient was quite deaf on the right side and still had pain about the right tympanum and a hissing noise when he blew his nose. When walking on the fourth day he noticed a slight creaking noise about his right ear. This disappeared after a while and his hearing after a week was much improved. He was never laid up.

I am, Sirs, yours faithfully,

April 23rd, 1904. AJAX.

THE VISION OF MYOPES.

To the Editors of THE LANCET.

SIRS,—With reference to the correspondence on the above subject which appeared in THE LANCET during October, 1903, when some methods of temporarily improving the vision of myopes were discussed, I beg to call attention to a little dodge which I have discovered with the same object. In the centre of my watch glass there is a little plano-concave disc with which many watch glasses are made and I find that by opening the glass of the watch and looking through this little concave portion it acts as a lens especially suitable to the myopic eye. Of course, this is merely an emergency dodge, but it is far better than making two pin-holes in a piece of paper or cardboard to get a binocular effect or looking into a small convex mirror wherein, although objects are clearly reflected to the myopic eye, the reversal of words on shop fronts, and so forth, is especially noticeable.

I am, Sirs, yours faithfully,

London, April 27th, 1904. MYOPE.

THE GERMAN SURGICAL CONGRESS.[1]

(FROM OUR BERLIN CORRESPONDENT.)

THE German Surgical Congress met in Berlin from April 6th to 9th, Professor BRAUN of Göttingen being in the chair. After the conclusion of the introductory proceedings Professor Braun made a sympathetic allusion to the eight deceased members and especially to Professor Gussenbauer of Vienna, the president of the Congress held in 1901. The Librarian (Professor FISCHER) reported that the new catalogue was now at the disposal of the members and on sale, the library containing 3756 books, 2254 volumes of journals, and 8862 reprints of articles.

Operations on the Blood vessels.

Professor KORTE (Berlin) showed a boy, 13 years of age, who as a sequel to a knife wound suffered from an arteriovenous aneurysm of the popliteal vessels. Professor Körte under Esmarch's ischæmia cut down on the tumour, broke down the adhesions, and sutured the wounds of the vessels. Primary union and complete cure were obtained.

Dr. RIESE (Britz) reported a similar case of aneurysm in a boy, aged 11 years, where a piece of bone two inches long was found in the wound of the popliteal artery.

Carcinoma.

Professor PETERSEN (Heidelberg) reported some cases of late relapses of cancer. In a case of cancer of the tongue operated on by the thermo-cautery a relapse appeared after 19 years and was treated a second time by the same procedure; no enlargement of the glands was present on either occasion. In another instance of cancer of the mamma where radical extirpation had been performed in 1889, local relapses were observed every third year and operated on, so that five operations—the last one in 1903—took place. At present the woman was in good health.

Dr. PERTHES (Leipsic) read a paper on the treatment of cancroids by the Roentgen rays. In 12 out of 13 cases a complete cure, and in the last one a considerable improvement, was obtained. As the majority of the cases were of comparatively recent date there might possibly be relapses. In three cases of cancroid of the lips the result was favourable, in other instances unfavourable, and so were some cases of cancer of the mamma. Dr. Perthes explained that the action of the rays was somewhat superficial—namely, only for a depth of about an inch. He was of opinion that the rays might have a specific action on the carcinomatous tissue, their influence on the metastatic glands being obvious.

[1] For this report we wish to tender our thanks to the editor of the *Deutsche Medicinische Wochenschrift*, through whose courtesy it has been forwarded to us by our correspondent.—ED. L.

Professor LASSAR (Berlin) in the discussion concurred in the opinion of Dr. Perthes and showed a number of patients who had either recovered or been benefited. He mentioned that cancroids sometimes disappeared under arsenical treatment.

Operations on the Gall-bladder.

Professor KEHR (Halberstadt) reported that he had up to the present time performed 911 operations on the gall-bladder and among them there were 11 remarkable ones in which he had directly joined the gall-bladder with the stomach (cystogastrostomy); in one of these 11 cases a retention cyst of the pancreas was present which was led into the gall-bladder so that after the operation the bile and the pancreatic juice were discharged into the stomach. One case was a hepato-cholangio-enterostomy—i.e., a direct union of the bile passages to the duodenum; in another case of aneurysm of the hepatic artery this vessel was tied.

Professor RIEDEL (Jena) recommended making the ductus choledochus accessible by a large flap and raising the liver. By this procedure more complicated measures might be avoided.

Professor PAYR (Graz) spoke of Kocher's method of freeing the duodenum in the course of which he had once observed fatal hæmorrhage.

Professor HAIDENHAIN (Worms) showed an instrument by which after the opening of the gall-bladder the calculi might be removed.

Dr. HABERER (Vienna) described experiments relative to the possible formation of a new gall-bladder after cholecystotomy.

Professor KRASKE (Freiburg) drew attention to the difficulty of removing calculi situated in the end of the ductus choledochus. A direct incision on Vater's diverticulum might be dangerous owing to the fact that eventually a pancreatic fistula might arise. In every instance of diverticulo-duodenostomy accurate sutures and packing with gauze were indispensable.

Dr. PELS LEUSDEN (Berlin) showed a patient in whom, after a cholecystostomy, papillomatous growths developed in the gall-bladder; the patient made a good recovery, but a small fistula persisted from which some years afterwards new papillomata were removed.

Dr. MEYER (Brussels) discussed the resection of parts of the abdominal wall and of the ligamentum teres for hepatoptosis which as a rule was associated with general enteroptosis.

Dr. GRASER (Erlangen) discussed traumatic rupture of the liver. In the course of a laparotomy for abdominal pain he found a large cavity in the liver filled with pus and containing some small pieces and one large piece of liver. The etiology of the cavity was somewhat obscure; it was, however, ascertained that the patient, one and a half years before, had fallen from a height of 16 feet without feeling any considerable pain. Six months later pain began without fever. In another case of abscess of the liver after perityphlitis the infection had very likely arisen from the portal vein.

Traumatic Lesions of the Abdominal Organs.

Dr. RIESE showed a patient who had received a bullet wound of the liver, stomach, kidney, and spleen. An operation was speedily performed and recovery ensued. Dr. Riese recommended the use of catgut for sutures of the liver.

Dr. BRENTANO (Berlin) reported the case of a patient with a bullet wound of the abdomen who had suddenly died after seven days' illness. At the necropsy a retroperitoneal lesion of the abdominal aorta with enormous hæmorrhage was found.

Dr. PELS LEUSDEN showed a girl who had received a gunshot wound, the thorax and the abdominal cavity being traversed and the diaphragm and the spleen lacerated. Notwithstanding this grave injury recovery ensued. By means of radiography about 30 shots could still be seen.

Dr. THOLE gave a report of his researches on the blood of the portal vein which, according to him, was sterile, so that the way of infection from the duodenum was probably not through the blood-vessels but through the bile.

Dr. VON FRISCH (Vienna) said that he had observed in a case of abdominal gunshot wound, where the stomach was perforated, that the posterior opening was smaller than the anterior one and found this fact to be confirmed by numerous experiments on animals.

Connexion between Diseases of the Gall-bladder and Pancreatitis.

Professor KORTE spoke on the connexion between diseases of the gall-bladder and pancreatitis. He had seen seven cases of acute pancreatitis together with cholelithiasis, of which four were cases of calculi of the ductus choledochus, one was a case of 900 calculi of the gall-bladder, one of cholecystitis, and one of cholangitis; three patients recovered and four died. The symptoms of these complicated and grave cases were rather obscure.

(To be continued.)

THE BATTLE OF THE CLUBS.

(FROM OUR SPECIAL COMMISSIONER.)

THE MANCHESTER AND SALFORD PROVIDENT DISPENSARIES ASSOCIATION.

WHILE dealing with the prevalence of hospital abuse at Manchester in a series of special articles some years ago the Manchester and Salford Provident Dispensaries Association also came in for a large share of criticism.[1] Cases were given of the gross abuse proving that what was intended for the poor was being utilised by persons who could well afford to pay proper medical fees. Complaints were also made that leaflets and other methods of advertising these dispensaries were employed, much to the detriment of the interests of the private practitioner. It is true that the practitioners themselves were somewhat to blame, for many new-comers had commenced their careers under the patronage of the Provident Dispensaries Association. Being anxious to render themselves popular and to increase the number of members on their list so as to lay the foundations of a practice, these new arrivals were not so likely to endeavour to prevent abuse. Originally the idea was, on the contrary, to constitute a district provident and charity organisation society of Manchester and Salford and thus to combine the work of preventing abuse of charity with that of organising a provident dispensary. For this purpose patients were divided into four categories. Persons absolutely devoid of any resources were to be referred to the Poor-law. The second category consisted of very poor people and they were to be sent to the hospitals. This meant in the case of single persons those who could not earn more than 15*s.* a week and in the case of married couples a limit of 21*s.* Above this figure the third category was reached and this consisted of people still too poor to pay medical fees but yet earning enough to insure against sickness by paying a penny per week. Should such persons have failed to take this precaution before they fell ill they might nevertheless join a provident dispensary and obtain immediate medical attendance on paying an entrance fee of 5*s.* The fourth category was composed of the rest of the public, that is persons who on inquiry were considered capable of paying medical fees. Such were the principles which it was intended should govern the provident dispensaries. They soon broke down in practice.

Instead of maintaining the classification just described it was thought that the interests of the medical profession would be sufficiently guaranteed by allowing medical officers of the dispensaries to sit on the boards of management. In spite of this, however, so much abuse arose that the 17 medical men who formed the first staff of the dispensary resigned and thereupon two new medical men were imported from outside and were given fixed salaries. With their aid the dispensary grew and branch establishments were opened in the outskirts, but the original scheme for reform and the prevention of abuse was more than ever consigned to pigeon-holes where are kept records of a forgotten past. Not only were abuses allowed but the medical officers were obviously sweated by the dispensaries and in 1895 they met and protested, pointing out that during the year the subscribers had paid £4422 and the medical officers had only received £2612. It is true that answer was made to this, the management throwing the whole blame for abuse on the medical officers themselves.[2]

All this, however, is ancient history. The profession is better organised now, especially in the Manchester district.

[1] See THE LANCET, Jan. 7th, 1893, p. 16.
[2] See THE LANCET, Jan. 23rd, 1897, p. 276.

It is also better supported by the General Medical Council in matters of this description. Institutions like these provident dispensaries should therefore be particularly careful not to re-awaken the old grievances and complaints. Nevertheless, new, as well as the old, grievances have arisen involving a whole series of side issues and sociological problems. It has been explained that the provident dispensaries are supposed to enrol only poor people who cannot pay medical fees and that they must subscribe a penny per week—that is, 4*s.* 4*d.* per annum. It has also been very generally believed that when the State or a municipality employs labour it is in honour bound to set a good example and to pay the highest current rate of wages. Therefore it was to be expected that persons employed by the Manchester corporation would on their side pay their medical attendants at least as well as do the other members of their class. To the credit of one of the bodies of workmen concerned it must be recognised that they never thought of acting otherwise. The Manchester corporation servants engaged in the cleansing department and the tramway employés, who number some thousands, followed the example of other large bodies of workmen and sought to join a sick benefit society. There is a Vehicle and Tramway Workers Association which is a trade union and has branches all over the country. Representations were made on behalf of the Manchester Medical Guild to the secretary of the Salford branch of the Tramway Workers Association and he approved of the position taken up by the organised members of the medical profession. It was pointed out that in Salford some medical practitioners had applied for the post of medical officer to the Salford tramway workers and had offered to do the work for a subscription of only 3*s.* 6*d.* or 3*s.* per member. The tramway workers, however, would not entertain such proposals. They preferred to engage a member of the Medical Guild, paying him the established rate accepted by the Guild of 4*s.* 4*d.* per annum, rather than to save a little money by employing a practitioner who was acting against the interests and the policy of the members of his profession.

In the face of all these circumstances it is easy to imagine the indignation aroused by a rumour that efforts had been made to induce all, or at least a large number, of workers engaged by the corporation to join the dispensaries at a reduced tariff. The secretary of the provident dispensaries was said to have addressed midnight meetings of tramway servants. Though ordinary poverty-stricken people had to pay 4*s.* 4*d.* a year he was reported to have offered to accept as members the comparatively well-paid municipal employés for only 3*s.* 6*d.* per head. At the same time the chairman of the tramway committee was boasting that the receipts made by the corporation tramways had exceeded £16,000 in one single week and that this was a record for Great Britain. In that case, why should the workers engaged in so exceptionally prosperous an enterprise be unable to pay medical fees? Were medical men to attend on charitable terms the servants of the ratepayers? On what ground had they any right to claim medical services at reduced rates? The Manchester Medical Guild discussed this matter on several occasions and correspondence ensued. The upshot was that first the general secretary of the provident dispensaries denied that he had addressed a meeting of tramway workers. The council of the Medical Guild then attempted to obtain evidence, though it was a difficult matter, as considerable time had elapsed since the holding of such meetings. Nevertheless, several men were found who swore an affidavit before a commissioner for oaths that they were present at a meeting held at Holt Town cleansing depôt dining-room on March 28th, 1903, when about 200 men were present. Mr. Stanley Jones, the general secretary of the provident dispensaries, is reported by the *Medical Guild Quarterly* on the evidence of these witnesses to have addressed the men and to have pointed out to them the advantages of joining the dispensaries. The handbill convoking this meeting mentions "the favourable terms," "the benefits of medical advice and medicine, &c."

The council of the Manchester Medical Guild now sought for medico-legal advice and consulted well-known authorities. The result was that the council wrote a letter to each of the medical officers of the dispensaries. The object of this communication was to point out that if, after friendly warning and counsel, the general secretary of the dispensaries continued to deliver such speeches this would certainly be regarded as "touting and canvassing" and would in consequence, if reported to the General Medical Council, be regarded as "infamous" in the professional sense because the medical officers of the dispensaries would profit by the touting practised by their secretary. Thereupon the medical officers of the Pendleton branch of the dispensaries passed and forwarded resolutions to the general committee of the Provident Dispensaries Association complaining of the action of the secretary as it compromised their position and exposed them to a reprimand from the General Medical Council. Perhaps after this warning the secretary of the dispensaries will be more reserved. But, nevertheless, a large number of tramway workers in the service of the Manchester corporation have been induced to join the dispensaries at 3*s.* 6*d.* a year and the medical staff only receives a little more than half this sum for attending to them when they are ill. So there are two causes of complaint: first, that touting has been practised; and secondly, that there is no reason to offer what amounts to charity when the recipients are the employés engaged on what has proved to be an exceptionally prosperous municipal enterprise. Municipalities are, on the contrary, bound to do their utmost to prevent sweating but because in this case the victims of the sweating system are professional men instead of members of the artisan class is no concern to be manifested for their welfare? "Sweating" is subcontracting and here are a lay secretary and committee contracting to supply medical attendance at 3*s.* 6*d.* per annum. But being themselves incapable of supplying this medical attendance they subcontract with medical men to attend the tramway servants and others. This is a subcontract and this constitutes sweating in the technical sense of the term, the first contractor having an opportunity of "sweating" a profit out of the second or sub-contract. To what extent this sweating is practised in this particular instance still remains to be proved but in the meanwhile the following figures are suggestive. They were submitted at the twenty-seventh annual meeting of the Hulme branch of the Manchester and Salford Provident Dispensaries Association. The subscription of members during the year amounted to £637 4*s.* 2*d.* and out of this only £376 9*s.* 10*d.* were paid to the medical staff. The receipts of the year exceeded the expenditure by £50 19*s.* 3*d.* and the branch had a reserve fund of £521 10*s.* 4*d.* There were 3371 members and during the year 34,193 prescriptions had been made up for them. To yield the profit and to pile up a reserve fund the medical officers, it will be seen by these figures, had to give prescriptions at less than 3*d.* each. This looks very like sweating. Not the working classes alone but all classes of the community have joined in the desire that the sweating system should be abolished and there is a strong feeling that in this matter the State and the municipalities should give a good example. It seems as if this has not been done in Manchester in so far at least as the interests of the medical profession are concerned.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Infantile Mortality in Liverpool: Artificial Foods and the Sterilised Milk-supply.

IN a report on the work of the health committee's depôts for the preparation of humanised milk for the use of infants Dr. E. W. Hope, the medical officer of health, refers at length to the high rate of mortality among infants below 12 months of age. Last year the death-rate of Liverpool was the lowest ever recorded, yet infantile mortality was 159 out of every 1000 born. The average for the last three years was 178 out of every 1000 born. The most frequent causes contributing to this high infantile mortality were atrophy, diarrhœa, and convulsions, all pointing to the assumption that from some reason or other nutrition was interfered with and that the infants were unable to live upon the food given to them. The loss of life from diarrhœa and kindred ailments is greatest in the summer and autumn months and Dr. Hope's careful observations, extending over several years, showed that the deaths of infants wholly or partially fed during those seasons on artificial foods were 15 times as great as they were amongst an equal number of infants fed upon breast milk. As the age of the infants increased the death-rate among children fed on artificial foods diminished. The most discouraging feature was the want of maternal care and intelligence. The efforts of the

health committee to insure a pure supply of cow's milk, the nearest approach to the infant's natural food, have been constant, but the problem of finding a complete substitute for the milk of a healthy mother has not been, and probably never will be, solved. The project of humanising the milk—that is to say, making it by the addition of milk-sugar, water, and cream as nearly as possible of the same chemical composition as the human milk and sterilising it—and adopting such methods as will enable the infant to receive this milk pure and without contamination was first introduced on a small scale at St. Helens and is now extensively carried out by means of distributing depôts in Liverpool. It was not claimed that the recent reduction in the rate of infantile mortality had been altogether brought about by the sterilised milk, yet it had undoubtedly played a part in the matter. From the date of the initiation of the scheme (early in 1901) to Dec. 31st, 1903, 6295 infants had been fed upon this milk, supplied either at the depôts or through dairies, the average age at the commencement of the feeding being three and a half months In the great majority of instances the infants thrived, increasing in weight and remaining healthy. Without attempting to draw too close deductions, the fact remains that out of 4453 infants coming very promiscuously to the depôts, at varied ages, and in conditions of health below the average, the mortality was 78 per 1000, as against 159 per 1000 for the whole city and from 88 to 118 for the best districts and from 212 to 215 for the worst. The figures are very remarkable and are clearly and strongly in favour of persevering with the supply of humanised milk. There are four depôts in the city where the milk is supplied—viz., Netherfield-road, Earle-road, Cazneau-street, and Park-road, all situated at different quarters of the city. The milk is supplied in nine bottles in a basket, each bottle containing sufficient milk for one feed, according to the age of the child. When all the milk in one bottle is not used the remainder must not be warmed up again for the infant but a fresh bottle must be opened for the next meal. The milk will be found to be quite sufficient if given regularly. The person using the milk must guarantee to continue its use regularly during the needs of the child and to send for it at the stated hours. Should the milk not agree with the child the matter should be reported at once. Every person using the milk will be supplied with two teats which must be kept clean and taken to the depôt for inspection at least once a week. Extra teats will be charged for at the rate of 3*d*. each. Just before using each bottle should be placed unopened in a jug or basin of hot water and warmed to the proper temperature. The bottle should then be opened and the teat inserted. It is recommended that at first the infant should be fed every two hours during the day and every four hours during the night. After using the bottle should be thoroughly rinsed in cold water. If children are sent for the milk they must be warned not to tamper with the stoppers of the bottles. The cost of the full weekly supply is 1*s*. 6*d*., payable in advance.

Health Students' Association.

At the opening meeting of the spring session of this association a lecture was delivered by Dr. Nathan Raw, physician to the Mill-road Infirmary, on the Prevention of Consumption in Large Cities. He drew special attention to the importance of diffusing knowledge on the subject among all classes of society and referred to the valuable teaching work done by the members of the association. One of the most important points touched on in the course of his interesting and instructive lecture was that tuberculosis was not by any means confined to the human race but that many domestic animals suffered from the disease and became centres of infection, the greatest harm resulting from the use of milk from infected cows. In this connexion he strongly supported the action of the Liverpool health committee in the establishment of sterilised milk depôts. Dr. Raw explained at some length the preventive measures which ought to be taken in nursing cases of phthisis in private houses and also alluded to the benefits of sanatoriums. He laid stress on the need of adequate provision for the treatment of advanced cases of the disease among the poor whose only refuge at present was the workhouse hospital. Dr. Raw was one of the pioneers in the movement for the establishment of the Liverpool sanatoriums. Questions were asked by several of those present to which the lecturer replied at length. The proceedings concluded with a cordial vote of thanks to Dr. Raw for his interesting address.

Royal Southern Hospital Nursing Institution.

At the annual meeting of the supporters of this institution held on April 20th, Dr. John Cameron, consulting physician to the Royal Southern Hospital, intimated his desire to retire from the position of chairman of the committee. Dr. Cameron has acted as chairman during the past 13 years and took a very active part in the inauguration of the nurses' home 24 years since; it is mainly due to him that so much useful work has been done in the past and that the institution has been so successful. The committee accepted Dr. Cameron's resignation with much regret and trusted that he would continue his connexion with the institution by accepting the office of president. Dr. Cameron is the doyen of the profession in Liverpool, his election as a member of the Liverpool Medical Institution dating so far back as the year 1839.

New City Analyst.

Professor J. Campbell Brown, the professor of chemistry at the University of Liverpool, has resigned the post of public analyst of Liverpool and the health committee of the city council has recorded its best thanks for his valuable services during the past 31 years. Mr. Collingwood Williams is to be his successor, subject to the approval of the city council, at £850 per annum for salary and expenses. He will be required to analyse for the corporation 1800 samples taken for the purposes of the Sale of Food and Drugs Act; in excess of that number he will receive 8*s*. per sample.

April 26th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Meeting of the Sanitary Institute at Cardiff.

WHEN the Sanitary Institute met at Manchester in 1902 it was suggested that sessional meetings might with advantage be held in districts outside London. The council of the institute accordingly arranged for a meeting in Manchester in February, 1903, and it was so successful that other meetings have since been held in Birmingham, in Leicester, and on April 23rd last in Cardiff. There was an audience at Cardiff of about 80, presided over by Mr. W. Whitaker, F.R.S., the chairman of the institute council, and a discussion upon School Hygiene was opened by Dr. Edward Walford with an address a summary of which will be found at p. 1219 of our present issue. In the course of the discussion which followed Dr. Walford's address Dr. J. Howard-Jones of Newport said that many sanitary defects in school buildings were left unremedied because of the expense involved, but he pointed out that £1,250,000 sterling were expended annually upon the education of children under five years of age and this sum would not only be sufficient for the provision of better schools but there would be something left for higher education. Dr. D. R. Paterson urged the importance of providing properly ventilated schools, not only for the children, but for the sake of the teachers who could not work properly under bad conditions. He also pleaded for those children who were partially deaf and where the defect was remediable but where if left unremedied the child often drifted into the class of those mentally unfit. Dr. H. Meredith Richards expressed the hope that school committees would see that the cubic space in non-provided schools was brought up to the standard required in provided schools. Mr. Herbert Jones drew attention to the large number of schools which were in use where the windows were in an utterly wrong position, compelling the children to twist themselves into unnatural postures, and Dr. J. Tatham Thompson endorsed the desirability of providing for the light to fall on the left side. He also deprecated the sending of children under five years of age to school, for educationally it was of no value and physically it was full of dangers. Miss Hurlbatt, the principal of Aberdare Hall, the women's hostel of Cardiff College, considered that the physical condition of many middle-class girls was woefully neglected. They came to the college with bad teeth and therefore impaired digestion, with bad eyesight and therefore headaches, and were quite indifferent to the advantages of being out in the open air. There was a low standard of vitality among many young girls which she thought might be remedied if they had more time to do absolutely nothing—to be, in fact, lazy. The chairman of the Glamorgan county council education committee (Dr. T. H. Morris) placed upon

the Board of Education the responsibility for a great deal of the deficient sanitary condition of schools. The Board, he said, was a distinct brake to progress.

Small-pox in Swansea.

Swansea has been exceptionally free from small-pox for many months but there is now one case in the isolation hospital. The patient who was a stowaway was landed from a coasting vessel trading between Glasgow, Liverpool, and Swansea. As he was obviously ill he was taken from the ship to the workhouse infirmary where he remained two days.

Dangers of Celluloid Collars.

The danger of using celluloid wearing apparel was once again illustrated in Cardiff last week. A youth after lighting a cigarette threw away a lighted match which fell upon the celluloid collar of a little boy whose neck and hair were burned, though fortunately without any serious result.

Fixity of Tenure for Medical Officers of Health.

Dr. Hugh Jones, the medical officer of health of the Dolgelly rural district, has been appointed by the district council for an indefinite period instead of as on previous occasions for three years only. This course was taken by the council in response to a communication from the Local Government Board stating that the Board had had under consideration generally the question of the tenure of office of medical officers of health and that it would be prepared to consider favourably an application for its sanction to Dr. Jones's re-appointment as medical officer of health without limit of time. The same fixity of tenure of office has also been secured in Wales by the medical officers of health of Cardiff, Rhondda, and Pontypridd urban districts and Llandaff and Dinas Powis rural district.

Bristol Royal Hospital for Women and Children.

The annual meeting of the subscribers to this institution was held on April 23rd under the presidency of the Lord Mayor. The medical report stated that 676 children and 65 women had been admitted as in-patients during 1903, as compared with 685 children and 64 women during 1902. 3534 children and 2046 women had been treated in the out-patient department. The financial statement showed that the total ordinary income amounted to £4449, the expenditure being £4904. The total adverse balance of the hospital now amounts to £1308. The Ladies' Auxiliary Association, under the presidency of the Duchess of Beaufort, had raised £523 for the funds of the institution. The committee in its report refers sympathetically to the death of Dr. J. G. Swayne of Clifton who for many years was the consulting obstetric physician.

Notification of Phthisis.

The annual report of the Exeter health department, which was issued on April 22nd, states that during 1903 the voluntary notification of phthisis has been practically useless, as not one case was notified although the city council offered to pay the usual fee for notification and 67 deaths were registered from the disease during the year.

April 25th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The University of Glasgow.

THE annual graduation ceremony at the University of Glasgow took place in the Bute Hall on April 18th. There was a very large attendance of students and the general public. Principal Story, the Vice-Chancellor, presided and performed the capping ceremony. The doctors of medicine (M.D.) numbered three and the bachelors of medicine and surgery (M.B., Ch.B.) numbered six, including one lady. The following day (April 19th) was observed as Commemoration Day. This is a new feature of the academic life as far as Scotland is concerned, though not uncommon in England, the idea underlying the ceremony being to recall the names of great men associated with the past history of the University. The arrangements for the different functions were admirably carried out by a joint committee of the University Court, Senate, and General Council. The proceedings began in the morning with a short service in the Bute Hall conducted by Principal Story, assisted by the Rev. Professor Taylor, Edinburgh, and the Rev. Professor Herkless, St. Andrews. This was followed by an oration on "Joseph Black, M.D.," by Sir William Ramsay, K.C.B., of University College, London. At the close of the address Principal Story, on behalf of the University, conferred the honorary degrees. Professor J. Glaister presented those receiving the degree of doctor of laws, among whom were the Hon. Joseph Hodges Choate, who at present fills the distinguished position of ambassador from the United States of America to the Court of St. James's; Sir Ludovic James Grant, Bart., Regius professor of public law in the University of Edinburgh; Mr. John Henry Muirhead, professor of philosophy in the University of Birmingham; Dr. William Stirling, Brackenbury professor of physiology in Victoria University in Manchester; and Sir William Taylor, K.C.B., Director-General of the Army Medical Service. With the conferring of the honorary degrees the interesting meeting terminated. Another interesting ceremony took place in the afternoon when there was presented to the University a memorial of the late Professor John Young, M.D., professor of natural history and keeper of the Hunterian Museum from 1866 to 1902. The memorial consisted of a medallion bearing in bas-relief a bust of the late professor. Mrs. Young and Queen Margaret College, in which Professor Young took a great interest, were presented with replicas of the medallion. In the evening a banquet was held at which over 200 gentlemen were present, including Principal Story, who presided, Sir William Ramsay, the Hon. the Lord Provost (Sir John Ure Primrose), the Hon. Joseph Choate, the Duke of Marlborough, the Earl of Stair, Sir Henry Craik, and Sir Ludovic Grant.—The medical classes in connexion with the University of Glasgow, Anderson's College Medical School, and St. Mungo's College opened on April 20th.

The Erection of the Deer Hospital: Interdict Craved.

Counsel were heard before Lord Pearson on April 16th in the Bill Chamber on an application for interdict at the instance of the trustees of Mr. George Alexander Baird of Strichen against the county council of Aberdeen and the Deer district committee of the council. The complainers sought to have the respondents interdicted from proceeding with the erection of an infectious diseases hospital on the estate of Strichen. They alleged that although negotiations for a site had taken place between the parties no concluded contract had been arrived at and that, as a matter of fact, a serious difficulty arose in connexion with the adjustment of a feu charter. Notwithstanding this they alleged that the respondents had commenced building operations and had refused to stop work pending the adjustment of the deed. The main question between the parties had reference to the adjustment of water rights between one of the complainers and the hospital. The respondents, who were heard upon a *caveat* against interim interdict, maintained that a contract of feu had been validly concluded and, therefore, had been followed by *rei interventus*, and in the circumstances they maintained that they were within their legal rights in proceeding with the works and they offered to meet with the complainers' agents and to adjust a clause in the charter to satisfy both parties. Lord Pearson said that he could not help regretting that matters here had come to be so acute. He would order answers in eight days and reserve as to interim interdict till the answers were advised. But he did entreat the parties—though he seldom said anything of the kind—to utilise the time even before answers were lodged, in the first place, to clear up their legal position, and, in the second place, to see if they could not find a *modus vivendi*, it might be as to the works being carried on under reservation but without the chance of the whole thing having to be undone, as it certainly would have to be if it proved in the end that there had been no concluded bargain.

April 26th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Dublin Sanitary Association.

AT the last meeting of the council of the Dublin Sanitary Association held on April 21st the following motion was passed unanimously:—

That the attention of the Local Government Board be drawn to the unsatisfactory manner in which the Infectious Disease Notification Act, 1889, is still being worked in the Dublin metropolitan district. For example, chicken-pox is notifiable in all the townships but not in the city; whooping-cough (at present epidemic and very destructive to child life) is notifiable in Pembroke but in none of the other districts

nor in the city; and measles is not notifiable in some of the districts, whereas it is scheduled as notifiable in others. The effect of this uncertainty in practice is to throw a serious obstacle in the way of notification.

Irish Dispensary Medical Officers.

The annual report of the Local Government Board of Ireland, which has just been presented to Parliament, contains a full and important statement in reference to the dissatisfaction of the Poor-law medical officers which, it is admitted, has existed for years. The Board draws attention to the gradual increase in the cost of the medical service which seems proved by statistics to have continued ever since the medical dispensary districts were established under the Poor Relief (Ireland) Act, 1851. The following appears in tabular form:—

Decades.	Total number of new cases.	Salaries paid.
1853 to 1862	7 542 429	£618 838
1863 to 1872	7 935 133	£740 290
1873 to 1882	6 699 791	£874 409
1883 to 1892	5 856 355	£899 792
1893 to 1902	5 966 579	£949 880

Those figures, it is stated, show a decrease of 20 per cent. in the number of the medical relief cases attended during the decade 1893–1902; and, on the other hand, an increase in the remuneration paid for medical services of 53 per cent. Those who are responsible for the report say that the enormous diminution in the population of Ireland from 6 552,055 in 1851 to 4 458,725 in 1901 and the consequent falling off in the amount of work done by the dispensary medical officers tend to support the opinion which has been formed. But in many unions a reduction of the staff of medical officers is not only feasible but is called for by the altered local circumstances. It is not stated that the decrease in the population, as recently reported by the Registrar General, was peculiar in the fact that it was the strong, well-to-do people of less than 35 years of age who have emigrated, leaving behind the poor, the old, the feeble-minded, and the chronic invalid. It would seem to me, therefore, that a fallacy may underlie the statement as regards "new cases" in the above statistical table, which apparently assumes that the practitioner's work is accurately measured by the number of "new cases" which he sees. As regards the question of holidays to medical officers the report goes on to say that the latter difficulty has in a great measure been overcome by the Local Government Act of 1898 providing for the recoupment out of the local taxation (Ireland) account of one-half of the remuneration paid by boards of guardians to the locum tenent. The medical officer will not, however, forget that the Local Government Act of 1898 gave him a vacation of one month in the year during which his substitute would be suitably paid. Owing to some legal defect the Act has proved inoperative and even now the guardians can change the four weeks' leave to two weeks, or, on the other hand, refuse to pay the sum of four guineas per week to a substitute, so that the unfortunate practitioner cannot obtain a substitute and loses his vacation altogether.

The Public Health Committee of the Corporation of Dublin.

The public health committee of the corporation has just completed the by-laws under the provision of the Employment of Children Act, 1903. They deal with the regulation of street trading by children in the city of Dublin.

Ulster Medical Society.

The ninth general meeting of the Ulster Medical Society was held in the Medical Institute, Belfast, on April 21st, Dr. John Campbell, the President, being in the chair. Dr. V. G. L. Fielden read a short paper on Ethyl Chloride as a General Anæsthetic. Mr. A. Fullerton showed the Stomach from a case of Ruptured Ulcer in an Hour-glass Stomach treated by suture and gastro-gastrostomy. Dr. Cecil E. Shaw showed Microscopic Preparations from some Cases of Catarrhal Conjunctivitis. Dr. W. L. Storey read a paper entitled "Undergraduate Days: Random and (rather) Personal Reminiscences of Class-room and Ward."

County of Cork Joint Hospital District.

The Local Government Board for Ireland has announced that the 28 sanitary districts in the county of Cork will be formed into a united district for the purpose of the provision, maintenance, and management of a hospital to be used as a sanatorium for consumptives for the benefit of the inhabitants of the sanitary districts in question. The joint board, which will be the governing body of the said united district, will consist of 56 representatives elected by the sanitary authorities of the district. Of these 56 representatives the county borough of Cork has seven, Cork rural district has seven, and Fermoy and Mallow rural districts have four each.

April 26th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Graphic Method.

AT a recent meeting of the Academy of Sciences M. Lannelongue read a paper in which he explained that he described by the above name a method which had for its aim the giving both to the eyes and the understanding the power of appreciating with great exactitude the modifications in form and the change in relation of the various parts of the human body. Moreover, it was a method of portraying on the living body deformities, displacements, fractures, dislocations, increase or decrease in volume, differences of level, and the like, or shortly any alteration, both superficial and visible or deep-seated and invisible. The principle of the method lies in the comparison of the normal side of the body with that which is really or apparently deformed. The observer marks upon the two portions of the body which it is wished to compare the salient or re-entering portions, the contours and the relations, both deep and superficial, of the organs. Palpation and touch serve to mark them out. The method is not new in the sense that touch has never been previously employed to mark out individual regions of the body, but it has not hitherto been generalised or applied systematically. Its application to disturbances of the locomotive apparatus is new and very useful and is a helpful adjunct to radiography. It has been found specially serviceable in affections of the region of the hip, the elbow, the knee, the head, the spine, and the instep. On the abdomen it is easy to mark out a pentagon which will show the situation of the organs. The method is applicable by all, even by the relatives of the patient. It is capable of at once offering a key to the diagnosis and of making it both easy and accurate. It is a lesson by facts which inscribe on the living body in their own place and without possibility of error the particularities of any region of the body so that their analysis is rendered easy.

The Pathological Agent of Human Trypanosomiasis.

At the same meeting of the Academy of Sciences M. Laveran recalled the fact that he had given the name trypanosoma Gambiense to a trypanosoma discovered by Ford and Dutton in the blood of a European who was suffering from irregular fever. This organism was first described by Dutton and later was found in a certain number of Europeans and in natives of the Gambia and Congo countries. Castellani still later notified that he had found in the cerebro-spinal fluid of certain negroes from Uganda who were suffering from sleeping sickness a trypanosoma which he described as of a totally distinct species and to which he gave the name of trypanosoma Ugandense. There seemed, however, to be some doubt as to whether these two organisms really were of different species and M. Laveran was given the opportunity of undertaking a research in order to set the question at rest. His researches led him to the conclusion that the two organisms were identical in species. Morphologically there was no difference between them, their pathogenic action on animals was identical, and an animal rendered immune against the trypanosoma Gambiense was also immune for the Ugandense variety and *vice versâ*. It has been fully proved that this trypanosoma is the cause of sleeping sickness but it must be remembered that it is often found in the blood of patients who die without ever having exhibited any symptom of sleeping sickness. M. Laveran is of opinion that the use of the name "sleeping sickness" should be abandoned. The term to use is "human trypanosomiasis," for this is applicable to all forms of the disease.

The Rouen Congress of Gynæcology, Obstetrics, and Pædiatrics.

The opening of the fourth session of the above national Congress took place recently at Rouen. The Mayor of Rouen was the president and there were also present the following

professors, all members of the Academy of Medicine—namely, Richelot, Budin, Kirmisson, Pozzi, Pinard, and Ch. Monod. There were besides a number of well-known medical men from Paris, the provinces, and from foreign countries. The mayor made a speech of welcome and speeches were also delivered by Professor Richelot, Dr. Guillemet, Dr. Brunon, the director of the Rouen School of Medicine, and Dr. Albert Martin, the secretary of the Congress. The Congress commenced by the reading of a report by Dr. Legueu on Pyelonephritis in its relations to the Puerperal State, which was followed by an interesting discussion. In the conjoint sections of Gynæcology and Obstetrics Dr. Ouin an *agrégé* professor at the Faculty of Lille, read a paper on Hysteropexy in connexion with Successive Pregnancies. This paper gave rise to a long and interesting discussion in which many members of the Congress took part. Other papers were read by Dr. Jayle, the head of the gynæcological clinic at the Faculty of Paris; by Dr. Cerné and Dr Martin, professors at the Rouen School of Medicine; by Dr. Fournier of Amiens; and by Dr. Poullet of Lyons. In the section of Pædiatrics M. Ausset of Lille read a paper on Barlow's Disease which was discussed by M. Comby, physician to the Paris Hospitals. A general meeting of the whole Congress was devoted entirely to the subject of the feeding of infants on a milk diet. It was decided that the next Congress should be held in 1907 at Algiers. M. Queirel, director of the Marseilles School of Medicine, was nominated as president of the Congress and president of the section of Obstetrics; Dr. Bourgier, professor at the gynæcological clinic of the Faculty of Bordeaux, as president of the Gynæcological section; and Dr. Louis Guinon, physician to the Trousseau Hospital at Paris, as president of the section of Pædiatrics.

Oophorectomy in Inoperable Cancer of the Breast.

M. Reynes of Marseilles read a paper before the Academy of Medicine at the meeting which was held on April 19th upon a case of Epithelioma of both Breasts which had ulcerated, was inoperable, and was cured by removal of the ovaries. The patient was shown to the meeting and the result was excellent, there being no sign of any growth except a scar which was somewhat hard. At the time of operation the patient, who was aged 33 years, was already very cachectic. One of the tumours had existed for nine years and the other one for three years. The histological examination, which was made by M. Cornil, showed that the growth was a stratified lobular epithelioma. Very shortly after the removal of the ovaries the tumours began to shrink. Within two months the enormous ulcer which existed on the left breast had cicatrised over. In another patient upon whom M. Reynes also performed removal of the ovaries the tumour of the breast is now shrinking rapidly. The physiological relations which exist between the ovaries and the breast make it easy to understand the influence of removal of the ovaries upon such cases. This method of operation, however, is only applicable in cases where the woman is at a stage of life in which full sexual activity exists.

April 26th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Medical Specialists in Germany.

IT is announced both in the medical journals and in the ordinary newspapers that an inquiry relative to medical specialists in Germany is to be carried out at the instance of the Government. Medical men practising as specialists are for this purpose requested to state what special branch of medicine they have taken up, where and by which teacher they were trained in their specialty, what was the duration of their special training, whether they have a private clinic of their own or are attached to a polyclinic, what was the date of their becoming qualified, and for what length of time they have been practising their specialty. As already explained in THE LANCET, the designation of specialist is often assumed by medical men who are not properly entitled to it, as their special training may have consisted of no more than some courses of instruction lasting for a month or six weeks. In the larger towns, where a verification of the ability of individual specialists by the other members of the profession is hardly possible, it has for a long time been felt that the present system is open to serious objections. Possibly the investigation which is now impending will lead to some legislative measures and to an extra examination for specialists.

A Congress on Radiography.

A congress on radiography will meet at Berlin from April 30th to May 3rd, 1905, under the honorary presidency of Professor Roentgen. The chair will be taken by his Excellency Professor von Bergmann. Letters of invitation have already been issued by a committee consisting of Professor Eberlein, Dr. Immelmann, and Dr. Cowl of Berlin, Dr. Albers-Schönberg of Hamburg, and Professor Rieder of Munich. In the letters of invitation it is explained that the tenth anniversary of Professor Roentgen's address announcing the discovery of the x rays will occur in 1905 and that radiography has for several years been indispensable in practical medicine as a means both of diagnosis and treatment. The committee, therefore, is of opinion that it is now time to take a survey of the development of radiography during the past ten years and to discuss the future of this branch of science. There will be an exhibition in connexion with the Congress.

German Medical Men Abroad.

The German Practitioners Association some time ago established an information office for medical men desiring to settle abroad. The object of that office is not only to advise the medical men in question as to the best opportunities of settling but also to deter men of inferior professional attainments from practising in foreign countries and thereby damaging the credit of the German medical profession. To this end the association has made an application to the Imperial Chancellor requesting that it may be informed whenever Germans resident in foreign countries wish a medical man to settle among them. The Chancellor has responded by sending a circular to all the German consuls directing them to supply the information required, together with their answers to a series of questions of which the following are the most important: number of inhabitants and of German residents in the country or district for which the consul is appointed; what languages are spoken; whether an examination is necessary for engaging in practice; number of resident medical men and of German medical men; nature of the climate and of the prevalent epidemic diseases; travelling expenses; probable cost of settling and of two years' maintenance; names and addresses of the persons or associations who desire the services of a German medical man; nature of the facilities offered by them towards the settlement of a medical man; whether an income is guaranteed or not; and some other particulars of a like kind.

April 23rd.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cassel Fund to fight Ophthalmia.

PROBABLY from all time "Egyptian ophthalmia" has been prevalent, certainly all European historians of the last 150 years have referred to it and it will not be forgotten how much Napoleon's troops suffered from it a century ago during their three years' occupation of Egypt. At that time the two most common diseases among even the European residents were ophthalmia and dysentery. In 1882 very little was known about the diseases of Egypt but those responsible for the English invasion had evidently studied with care the accounts of the French campaigns here and every British soldier on landing was provided with goggles and a gauze veil and was enjoined to try to keep his eyes clean until it was found that the goggles and veil were not necessary. Then the number of blind and one-eyed natives in the streets was very striking but though there are no statistics to help one all old residents believe that blindness is on the decrease. Sir Ernest Cassel was, however, struck last year with the great amount of blindness and untreated eye disease in Egypt and with the fact that the Government is doing so little to contend against it. He therefore gave a munificent donation of £40,000, which by successful investment in this country of wonderful finance is now worth £50,000, and after consultation with various experts it was decided to employ the interest of this sum in an experimental encampment in one of the country towns, it being felt at the outset that the ophthalmic surgeon must be

taken to the people. The experiment has now been started for three months and has already been referred to in THE LANCET.[1] On Jan. 11th Mr. A. F. MacCallan, who had come from the Royal London Ophthalmic Hospital for the special purpose, began to see patients in a little camp of tents near Menouf, a town of 23,000 people about half way between Cairo and Alexandria. He is aided by an Egyptian medical man who was lately ophthalmic house surgeon at Kasr-el-Aini Hospital and a few native servants who are being trained as sick orderlies. After the earliest days of mild curiosity at this new freak on the part of the English a large number of women and little girls came fearlessly alone to beg for treatment. As is universally the case in Oriental countries they display the greatest faith and confidence in an unknown Englishman, even if he can only talk to them in broken Arabic. Another peculiarity which strikes one is their desire to be operated upon. When a woman has undergone a painful operation on one eye she will clamour loudly for similar attention to the second eye and will come back to the tent day after day until she gets it. Perhaps this is partly due to the undoubted fact that they have less sensibility to pain than European patients have.

During the three months 6157 patients have been treated, including 1289 new cases, a large proportion of them suffering from trachoma or trichiasis. 615 operations have been performed by Mr. MacCallan and his assistant, 500 being extra-ocular, mostly on the eyelids, with some enucleations of the eye, and 115 being intra-ocular, such as iridectomy and cataract extractions. Minor operations, such as removal of foreign bodies, scraping eyelids, or the treatment of Meibomian cysts, are not included in these figures. Anæsthetics are not used habitually but chloroform is necessary for children and nervous women; cocaine is employed for all intra-ocular operations on adults, and Schleich's fluid by subcutaneous injection is useful for operations on the eyelids. To try to instil some primary ideas of cleanliness patients are refused treatment if they arrive dirty; they then run off to a neighbouring canal and promptly wash themselves and reappear. They are very grateful and attend willingly as often as they are told to and they evidently tell their friends of their gratitude, for sometimes relatives of former patients walk several miles to be seen. A few weeks ago the Englishman's pet dog died, when some hundreds of ex-patients attended the funeral voluntarily and wailed as they would have done for one of their own family. Yet these ignorant but kindly peasants are Mahomedans and the white man is a Christian and the pet was an unclean animal. The patients are all seen gratuitously and most of them obviously belong to the poorest folk who could not pay even a small fee but every now and then a well-to-do man comes among them. There is as yet no hospital abuse in this, for where is he to go? There is so far no hospital specially for the eyes in all Egypt and though there are Egyptian and Greek medical men in many country towns most of them have had no special ophthalmic experience and their universal treatment seems to be to employ silver nitrate painting until the conjunctivæ are discoloured, while their operations, like those of the barbers, are very undesirable.

I have had the opportunity of visiting the Cassel encampment and found ten tents pitched in a field of clover outside the town, with a kitchen and store-room built of mud bricks. The latrines consist of the always useful cubical paraffin tins on the daily removal system. The water is all brought from a neighbouring well and passes through a Berkefeld filter before being used. Two of the tents are reserved for in-patients of both sexes after operations, which consist chiefly of cataract extraction but also include iridectomy and plastic operations. In spite of an occasional sandstorm there has been so far no septic result. The operating theatre consists of a large marquee of the Indian pattern, with a cement floor, sterilisers, all modern surgical necessaries as in the best London theatres, and large flasks of sublimate lotion supported on reed tripods, while the two tables consist of stretchers supported on high trestles. The tables, washstands, and the rest of the camp equipment are portable so as to make future travelling easy. A rope barrier has been found necessary outside the operating marquee to keep patients from crowding out of turn upon the tables. The poor people have found that only about nine or ten operations can be done daily and they are anxious not to be postponed till the morrow. There are always dozens of cases of trichiasis waiting to be operated on at some convenient season. The daily routine excepting on Fridays is to sort the new patients and to dress the old ones at 8 A.M. Then three hours' steady operating follows till the surgeon is too tired to continue, after which the new and the old out-patients have to be seen which takes till about 2 P.M. At sunset ophthalmoscopic and refraction patients are seen and the administrative work has to be done before bedtime. I saw Mr. MacCallan do seven operations in one and a half hours, the patients lying quite still, supported by their faith in the operator and only showing by their rapid breathing that they were not thoroughly at ease. The first was a cataract in both eyes in a young man, which was extracted under cocaine; he had old trachoma and had been kept in a tent for a week to sterilise his eyelids. The next was also a cataract case in a young man. Then a boy, aged six years, was operated on under chloroform for trichiasis of both lids on both sides, which entirely prevented him from opening his eyes. Then a double trichiasis operation in a middle-aged woman, and later a case of old trachoma which had been operated on by the village barber who had produced retraction of the upper lids; this required a transplantation of a graft of mucous membrane from the woman's lower lip to both lids (van Millingen's operation). The adult cases of trichiasis were done almost painlessly by means of Schleich's fluid. As I saw the work and heard the grateful murmurs of the friends waiting to lead away the patients after operation I could quite understand Sir Ernest Cassel's pleasure at his recent visit, and no one can wonder that he has already decided to bring out another English ophthalmic surgeon to conquer a new field.

The energetic Mr. MacCallan recently offered to inspect the eyes at a private school in Menouf where the boys are aged from six to 16 years. He found 133 day pupils and only nine of them with normal eyes, so he had these isolated on separate benches to try to save them from infection. Nine children require operation for trichiasis or iridectomy, eight want their lids scraped, 35 are in an infective condition of trachoma, and no less than 93 of the 133 need eye treatment of various kinds. It is satisfactory to know that the committee managing this school has begged him to take all necessary steps to prevent and to cure disease. This experience is by no means unique. Though the Government schools have now for years paid some attention to the scholars' eyes trachoma is still present both among the teachers and the taught, while the private schools and "kuttabs" are as yet untouched by the hand of ophthalmic reform. What are the chief causes of all this trachoma in Egypt? Are they not overcrowding in dark, ill-ventilated houses, the habit of allowing the infected and the uninfected to sleep in the same beds and to use the same rags and bathing water, the utter neglect of all treatment, and the indifference of mothers to the flies which cluster over the children's eyes to drink up moisture? Sanitary England has now been in occupation of ignorant Egypt for 21 years. Is it not time that something was done to instil into the rising generation some of the firstfruits of preventive medicine? If it were possible to multiply this camp a hundred-fold one would still feel that the operators were chiefly dealing with the results of ophthalmia, not with its prevention.

The poorest inhabitants of Egypt live in hovels and neglect every law of sanitation, being only saved from pestilence by the wondrous daily action of sunshine. It is impossible, except during epidemics of plague and cholera, for any sanitary officer to control their domestic life and we cannot but be aware that the microbic cause of granular ophthalmia exists in the dwelling places. But if the middle-aged and the old are at present past praying for cannot measures be taken to instil into the future generation the first principles of clean living? Many a child has in Europe taken the gospel of cleanliness back to his parents from school. The Egyptian child is extraordinarily docile, receptive, and imitative, and if he could only be taught to keep his eyes clean till he reached the years of puberty he would probably continue his life with a wholesome fear of ophthalmia. One possible means of arriving at such a solution would be to cause every scholar and perhaps every teacher, as a routine detail of toilette on coming to school and on leaving again in the evening, to wash his eyes in a corrosive sublimate lotion which might be as weak as 1 in 5000. This simple measure could be carried out without medical supervision and could do no harm. In the primary schools of the Egyptian Government a sanitary

[1] THE LANCET, April 9th, 1904, p. 1010.

primer is in use which is a move in the right direction, but in the mosque schools, which are not under the direct control of the Government, no such teaching exists and the cases of trachoma are found to vary from 80 to 90 per cent. The Egyptian can be taught anything by Englishmen and I venture to think that the time has come for him to learn that ophthalmia is preventable and in time he will learn to adopt the necessary measures for its prevention.

Cairo, April 17th.

Obituary.

FRANCIS JOSEPH LANDER, M.R.C.S. ENG., L.R.C.P. LOND.

CLOSE to his house in Stamford Mr. Lander met with a fatal accident on the afternoon of April 12th when out bicycling with his wife. Descending a rather steep lane which opened into a main road he lost control of his bicycle and dashed into a passing dray-horse. The base of his skull was fractured and he received other injuries. He was taken home and lingered until shortly after midnight when he died. Mr. Lander was a member of an old Leicestershire family. He received his medical education at the London Hospital and commenced his professional career as house surgeon to the Nottingham General Dispensary. He subsequently bought a practice in Nottingham, remaining there for about ten years, and was medical officer to the No. 1 Poor-law district. About a year ago, after a severe attack of pleurisy the state of his health gave rise to grave anxiety and he was strongly advised to leave Nottingham. This he did and after travelling for some time took a practice in Stamford four months ago. Here, completely recovered in health and in what he considered ideal surroundings, he looked forward to spending many happy years, but it was not to be. Mr. Lander was of a singularly gentle and loving disposition; he was not a pushing man and his interests were mostly centred in his profession. He had a sound knowledge of his work and succeeded in obtaining not only the confidence but also the esteem of his patients. He was 39 years of age. A widow and one young son lose a devoted husband and father.

JAMES FRANCIS TAPLIN, M.D., C.M. GLASG.

WE have to record the death of Dr. Taplin, the oldest medical practitioner in Small Heath, Birmingham, which took place suddenly at his residence in Coventry-road on April 14th. Dr. Taplin, who was 66 years of age, was born in Devonshire, his father being the Rev. James Taplin, a well-known Unitarian minister. When 16 years of age he was apprenticed for a term of six years to a firm of surgeons (Messrs. Pearse and Northey) at Tavistock and in 1860 he sailed in the *Windward* of Peterhead on a whaling expedition to the Arctic regions, in order to earn the requisite fees for completing his medical education. On his return he resumed his studies at Glasgow, acting for a time as dresser to Mr. (now Lord) Lister and finally graduated at that University, taking his M.D. in 1863 and C.M. in 1865. After obtaining his qualifications he went several voyages as a ship's surgeon to India, sailing *viâ* the Cape as the Suez Canal route was not then opened, and then settled down as assistant to a surgeon at Shaftesbury in Dorsetshire. His exceptional abilities and industry were at once recognised and he received an offer of partnership but his love of travel and adventure was not yet satiated and he accepted in preference an appointment on a tea plantation in Assam. Here he practised for a few years and before returning to England in 1872 he also practised for a short time in Calcutta where he was a member of a local lodge of Freemasons. Since he returned to England he has been engaged in general practice in Coventry-road, Small Heath, and his sudden death has come as a sad blow to his numerous friends and patients. Possessed of a genial and cheery manner and indefatigable energy he was greatly loved by all; whilst his wide experience and sound professional knowledge gained him a high reputation as a practitioner of medicine. Upright and conscientious in the highest degree he was a man of broad human sympathies, ever at the call of the sick and suffering, whether rich or poor.

For the last 32 years he devoted himself entirely to his practice and denied himself even much-needed rest and recreation in order to gratify the exacting demands of his oldest patients, many of whom owed their lives over and over again to his tireless devotion and attention. Until the very day of his death he had been in active work and his sad end has cast a gloom over the whole neighbourhood. If ever man was loved it was he, and now that he has laid down his arms his friends will treasure recollections of him as a kindly, honourable, and God-fearing gentleman. His son Mr. Julian Taplin has the sympathy of the profession in the irreparable loss which he has sustained.

GEORGE COCHÉT CHESNAYE, M.R.C.P., F.R.C.S. IREL., SURGEON-COLONEL, I.M.S.

Surgeon-Colonel Chesnaye, whose death at his residence at Bournemouth on April 12th we announced in the Services column of THE LANCET of April 23rd, was born in 1838 and was educated in Dublin. In 1859 he received a commission in the Bengal Medical Service as assistant surgeon and was attached to the 3rd Bengal European Light Cavalry and two troops of Bengal Horse Artillery. At Meean Meer and at Amritsar during the cholera epidemic of 1861 he did some excellent work and received high praise from the Duke of Cambridge and from the Commander-in-Chief in India. He was in medical charge of the Lawrence Military Asylum at Sanawar from 1866 to 1868, Assistant-Field-Surgeon with the Hazara Field Force in 1868, and officiating residency surgeon at Khatmandu from 1869 to 1871, in which latter year he was appointed surgeon. He was in medical charge of the 4th Gurkha Rifles from 1871 to 1887 when he was appointed examiner of medical and fund accounts in Calcutta, having previously in 1873 reached the rank of surgeon-major. In 1889 he was promoted to deputy surgeon-general, ranking as surgeon-colonel, and was appointed to the Lahore district, which post he held till 1894, when he retired. During the Afghan War of 1878-80 he took part in the capture of Ali Musjid, the expedition to Sherpore in December, 1879, the action of Zahidabad, the operations in Kohistan, the march from Kabul to Kandahar, and the battle of Sept. 1st. For his services in the Afghan War and in the Looshai Expedition of 1871-72 he was mentioned in despatches and received the thanks of the Government of India. In 1894 he was awarded a pension for distinguished and meritorious service. It is interesting to note that Surgeon Colonel Chesnaye's father, Captain J. C. Chesnaye, R.N., was a midshipman on board the *Orion* at Trafalgar.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Adolf Wertheimber of Munich, a voluminous writer on diseases of children, at the age of 72 years.—Dr. Stahr, surgeon-general of the Prussian army and until his retirement recently sub-director of the Kaiser Wilhelms Academy in Berlin, at the age of 61 years.—Dr. Max von Strauch, *privat-docent* of midwifery and gynæcology in the University of Moscow.—Dr. Lyot, surgeon to the Paris Hospitals.—Dr. V. I. Dobrovolsky, formerly professor of ophthalmology in the Military Medico-Chirurgical Academy of St. Petersburg.—Dr. Zarubin, formerly professor of clinical surgery in the University of Kkarkoff.—Dr. V. Ratimoff, formerly professor of clinical surgery in the Military Medico-Chirurgical Academy of St. Petersburg.

MALARIA AND INFLUENZA IN RUSSIA.—The *Novosti* has a note from Voronesh as follows: "In our province malaria is increasing alarmingly and taking a very severe form. Round the town of Voronesh of late the epidemic has assumed such universal sway that scarcely a house or lodging has escaped. Thousands of otherwise healthy people are dying from it, whilst others remain very ill for months in spite of medical care. Its progress can be judged from the official figures as follows for 1901, 1902, and 1903—namely, 95,000, 130,000, and 160,000 cases respectively." The note adds that as the population can be with difficulty persuaded to call in medical aid and as the above figures are those of certified cases the totals may easily be called double those cited. Influenza, says the *Sviet*, is raging in Moscow in a special form, the malady being accompanied by a serious disturbance of the motor nerves.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—**The following gentlemen passed the first examination of the Board at the quarterly meeting of the examiners in the subjects indicated:—**

Chemistry.—Alexander Baxendale, Owens College, Manchester; Arthur Cecil Barker Biggs, University College Hospital; Herbert Vernon Bettley-Cooke, Arthur James Brown, Charles Clarke, and Roderick Ernest Clarke, London Hospital; Sidney Howard Browning, Guy's Hospital; John Peter Clarke, University College, Liverpool; Reginald Cock, Charing Cross Hospital; Francis John Craddock, St. Bartholomew's Hospital; Ernest Edgar Davies, University College, Bristol; Archibald Wallace Duncan and George Douglas Gordon Fergusson, St. Mary's Hospital; Howell Woodwell Gabe, Middlesex Hospital; Claude Percival Rivers Harvey, London Hospital; Herbert Wilks Heasman, Guy's Hospital; Harold Leslie Hughes, St. George's Hospital; Harold Garnett Janion, University College Hospital; Joseph Arthur Alexander Kernahan, St. Bartholomew's Hospital; Henry Goff Kilner, Middlesex Hospital; Charles Eric Lowe, Westminster Hospital; Guy Harvey Mead, St. Thomas's Hospital; Charles Anderson Meaden, Birkbeck Institute; Henry Rubert Mullins, Oxford University and Guy's Hospital; Albert Edgar Nicholls, University College, Cardiff; Thomas Francis O'Mahony, London Hospital; Richard Goodhart Oram, Guy's Hospital; Charles Edward Hewett Paley and William Norman Awdry Paley, Westminster Hospital; Richard Alfred Parsons, St. Mary's Hospital; Michael William Phipps, Queen's College, Cork, and London Hospital; Edward Spencer Pierrepont, Technical Institute, Wandsworth; Ernest Alfred Pywell, St. Thomas's Hospital; Richard Bancroft Nevil Reade, St. Mary's Hospital; Martin Remers and James Rowland Rigg, Owens College, Manchester; Frank Rendall, London Hospital; Arthur Rhodes, Birkbeck Institute; Reginald George Riches, St. Bartholomew's Hospital; William Sidney Simpson and Philip Edward Stibbe, Charing Cross Hospital; Charles Raymond Start, Felsted Schools; Donald Wainwright, Middlesex Hospital; William Hall Watson and Francis James Wheeler, Guy's Hospital; Cyril Howard Welch, King's College Hospital; Howel Meirig Williams, University College, Aberystwyth; and Henry Adrian Fitzroy Wilson, St. Thomas's Hospital.

Practical Pharmacy.—John Avery and Norman Huthnance Bye, London Hospital; Frederick Charles John Baker, King's College and St. Mary's Hospitals; Ernest James Chambers, Westminster Hospital; Richard Julius Cyriax, Edinburgh University; John William Dadd and Alfred William Eyles, Guy's Hospital; Edward Peter Joseph Dawes, Birmingham University; Lionel Cecil Ferguson, St. Bartholomew's Hospital; George Finch, Yorkshire College, Leeds, and St. Thomas's Hospital; William Henry Flint, Birmingham University; Bertram Maughan Footner, King's College Hospital; Reginald Franklin and Raymond Sydney Harper, Guy's Hospital; Leonard Austen Harwood, private study; Stanley Heathcote, Owens College, Manchester; Arthur Tosse Jackson, L.D.S. Eng., University College, Sheffield; Henry Hollis Jenkins, Guy's Hospital; Thomas Lloyd Kenion, University College, Liverpool; Henry Andrew Lash, St. Mary's Hospital; John Daniel Stuart Lloyd, Birmingham University; Alfred Cecil Martin, London Hospital; Charles Anderson Meaden, private study; Leonard Myer, L.D.S. Eng., Guy's Hospital; Harry Williams Nicholls, Middlesex Hospital; Oswald Sinclair Norton, Guy's and Westminster Hospitals; Charles William O'Brien and Arthur O'Neill, St. Bartholomew's Hospital; William Stewart Orton, Guy's Hospital; Edward Symes Prior, University College, Bristol and Middlesex Hospital; Robert Montgomery Rendall, David Harold Richards, Gerald Charles Frederick Robinson, and Henry Warr Bennett Walling, Guy's Hospital; Charles Raymond Start, private study; Henry James Davey Walker, London Hospital; John Warburton, Owens College, Manchester; and Sydney Williams, University College, Cardiff.

Elementary Biology.—Stanley Denovan Adam, Rupert Blake Adams, and Frank Bastord, St. Mary's Hospital; Edward Bruce Allnutt, John James Harkness Beckton, and Norman Barnett Benjafield, St. Bartholomew's Hospital; Alexander Baxendale and George Noel Braham, Owens College, Manchester; Hubert Vernon Bettley-Cooke, London Hospital; Sidney Howard Browning, Guy's Hospital; Cuthbert John Butler, Charing Cross Hospital; Charles Adolph Caufman, St. Thomas's Hospital; Ernest James Chambers, Westminster Hospital; John Peter Clarke, University College, Liverpool; Roderick Ernest Clarke, London Hospital; Reginald Charles Clifford, St. Bartholomew's Hospital; Reginald Cock, Charing Cross Hospital; Benjamin Dale, St. George's Hospital; David Davies, London Hospital; Sidney Alfred Day, St. Mary's Hospital; John William Doherty, Birkbeck Institute; Charles Stuart Douglas and Arthur Downes, St. Bartholomew's Hospital; John Griffiths Edwards, City of London College; Bernard Grainger Goodwin, University of Birmingham; Richard Sydney Graham, St. Mary's Hospital; Gilbert Clement Gray and Percy Hall, St. Bartholomew's Hospital; Eric John Durnford Haining, University College, Bristol; Martin Hallam, University College, Sheffield; Philip Thomas Harper, St. Thomas's Hospital; William Gladstone Harrop, Owens College, Manchester; Claude Percival Rivers Harvey, London Hospital; Leonard Austin Harwood, Birkbeck Institute; William Henry Stewart Hodge, St. Bartholomew's Hospital; Gilbert Percy Humphry, St. George's Hospital; Harold Garnett Janion, University College Hospital; Thomas William Jones, Charing Cross Hospital; Charles Eric Lowe, Westminster Hospital; Russell Hardy Sidney Marshall, St. Mary's Hospital; Francis Leslie Nash-Wortham and Tha Htoon Oo, St. Bartholomew's Hospital; Albert Edgar Nicholls, University College, Cardiff; Thomas Francis O'Mahony, London Hospital; Thomas Geoffrey Percival and Clifford Crawshaw Pickles, Yorkshire College, Leeds; Archibald Bruce Pettigrew, University College, Sheffield; Michael William Phipps, London Hospital William Howard Pickup, Birmingham University; Cyril Macdonald Plumptree and Humphry Cooper Pugh, Guy's Hospital; Edward John Joseph Quirk, Charing Cross Hospital; George Frederick Randall, Middlesex Hospital; Martin Remers, Owens College, Manchester; Arthur Rhodes, Birkbeck Institute; James Freer Richardson, London Hospital; Arthur Botley Scott, St. Bartholomew's Hospital; William Sidney Simpson, Charing Cross Hospital; Herman Spitz, St. Bartholomew's Hospital; John Startin, St. Thomas's Hospital; Phillip Edward Stibbe, Charing Cross Hospital; John Edgar Taylor, Yorkshire College, Leeds; Henry Hercules Skinner Templeton, University College, Bristol; Carl Rudolf Baltzar von Braun and Charles Fitzgerald Willies, St. Bartholomew's Hospital; Arthur Henry Leopold Thomas, Harold Eustace Wall, Jocelyn Langton Waller, and John Beazley Webb, St. Mary's Hospital; David Phillips Williams, Charing Cross Hospital; Sydney Williams, University College, Cardiff; Henry Adrian Fitzroy Wilson, St. Thomas's Hospital; and Pelham Vansittart Wynn-Wernnick, Merchant Venturers' Technical College, Bristol.

SOCIETY OF APOTHECARIES OF LONDON.—**At the examination held in April the following candidates passed in the subjects indicated:—**

Surgery.—G. Dewick (Sections I. and II.), St. Thomas's Hospital; W. S. Gibson (Sections I. and II.), Manchester and Charing Cross Hospital; C. Kellgren (Section I.), Royal Free Hospital; L. H. Lewis, Middlesex Hospital; H. J. May (Sections I. and II.), London Hospital; F. H. Hand (Section II.), St. Mary's Hospital; A. B. S. Todd (Sections I. and II.), Leeds; and T. R. Waltenberg (Section II.), Manchester.

Medicine.—A. Anderson (Sections I. and II.), Leeds; G. J. Eady (Section I.), St. Bartholomew's Hospital; J. H. Harrison (Section I.), Sheffield; J. A. Kilpatrick (Section II.), King's College Hospital; C. S. Scott (Section I.), St. Bartholomew's Hospital; and R. W. L. Wood (Sections I. and II.), Leeds.

Forensic Medicine.—M. O. Dollie, University College Hospital; G. J. Eady, St. Bartholomew's Hospital; H. R. Grellet, Guy's Hospital; H. G. Peel, Leeds; L. S. Veale, Royal Free Hospital; F. J. Waldmeier, London Hospital; and R. W. L. Wood, Leeds.

Midwifery.—A. Anderson, Leeds; H. H. R. Bayley, Charing-cross Hospital; A. G. C. Findlay, University College Hospital; W. A. T. Lloyd, London Hospital; W. S. Mitchell and E. D. Richardson, St. Mary's Hospital; A. B. S. Todd, Leeds; L. S. Veale, Royal Free Hospital; J. S. Ward, Sheffield; and J. A. R. Wells, St. Thomas's Hospital.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery: G. Dewick, F. H. Hand, L. H. Lewis, H. G. Peel, and F. J. Waldmeier.

UNIVERSITY OF CAMBRIDGE.—**The following have been appointed members of the State Medicine Syndicate which will conduct the examination for the diploma in Tropical Medicine and Hygiene: Mr. H. E. Durham, Dr. J. W. W. Stephens, and Dr. F. H. H. Guillemard.—Mr. D'Arcy Power has been appointed an additional examiner in surgery and Dr. J. R. Bradford an additional examiner in medicine for the M.B. degree.—The first, second, and third (Part I.) examinations for M.B. will begin on June 13th. Names have to be sent to the tutors of Colleges by May 26th.—The following candidates have satisfied the examiners in both parts of the sanitary science examination for the Diploma in Public Health:—**

Edward Baines, Granville and Caius; Wilfred William Ogilvy Beveridge, Basanta Kumar Chatterjee, Thomas Aldous Clinch, Myer Coplans, Ernest King Gawn, Edward Samuel Gorman, Arthur Edward Horsfall, Henry Louis Powell Hulbert, Trinity; Arthur Charles Ingram, St. John's; James Conway Jameson, Ramsay Millar, Thomas Rhind, and Eliot Swainston.

UNIVERSITY OF DURHAM.—**At examinations for the degree of Bachelor in Medicine held recently the following candidates satisfied the examiners:—**

FIRST EXAMINATION.

Elementary Anatomy and Biology, Chemistry and Physics.—First-class Honours: Frank Rawlinson Dudderidge, College of Medicine, Newcastle-upon-Tyne. *Second-class Honours:* Charlotte Purnell, London School of Medicine for Women. *Pass List:* Frederick William Cheese, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; Helen Mary Gurney, Gertrude Ethel O'Brien, Hubert Shield, and Joseph Albert Sacco, College of Medicine, Newcastle-upon-Tyne; Herbert James Slade, M.R.C.S., L.R.C.P., St. Bartholomew's Hospital; and Charles Sim Thompson, College of Medicine, Newcastle-upon-Tyne.

Elementary Anatomy and Biology.—Kenneth Bruce Allan, College of Medicine, Newcastle-upon-Tyne; Harold Ernst Bloxsome, St. Bartholomew's Hospital; Leonard Foster Browne, College of Medicine, Newcastle-upon-Tyne; Lionel Knipe Edmeades, Guy's Hospital; Elizabeth Niel Havelock and Hedvig Christina Kellgren, College of Medicine, Newcastle-upon-Tyne; Thomas Harold Vessey King, St. Bartholomew's Hospital; Elizabeth Patteson, London School of Medicine for Women; Francis Aidan Robinson, Rev. Robert Henry Smallwood, M.A., and Basil Taylor, College of Medicine, Newcastle-upon-Tyne; and John Franklin Young, Guy's Hospital.

Chemistry and Physics.—Hubert Cyril Willoughby Allott, Guy's Hospital; Herbert Ridley Crisp, William Harold Edgar, and Frank Widowfield Melvin, College of Medicine, Newcastle-upon-Tyne; Theresa de Gournay Miller, London School of Medicine for Women; and Frank Walter White, College of Medicine, Newcastle-upon-Tyne.

SECOND EXAMINATION.

Anatomy, Physiology, and Materia Medica.—Second-class Honours.—David Ranken, College of Medicine, Newcastle-upon-Tyne.—*Pass*

List.—Thomas Henry Bishop, M.R.C.S., L.R.C.P., University of Edinburgh; Sydney Havelock, B.Sc., College of Medicine, Newcastle-upon-Tyne; Camilla Lucy Heckrath, London School of Medicine for Women; Hector Graham Gordon Mackenzie, M.A., and Ernest Lacey Markham, College of Medicine, Newcastle-upon-Tyne; Jessie Jean Martin Morton, Edinburgh School of Medicine for Women; Bertha Mary Mules and Jessie Margaret Murray, London School of Medicine for Women; Howard Bewlay Stephenson, College of Medicine, Newcastle-upon-Tyne; Frank Whitby, St. Bartholomew's Hospital; and Cuthbert Rex Wilkins and James Leslie Wilson, M.A., College of Medicine, Newcastle-upon-Tyne.

THIRD EXAMINATION.

First-class Honours.—James Glenny Gibb, St. Bartholomew's Hospital.

Second-class Honours.—Wilfrid Fairclough and Robert Joseph Willan, College of Medicine, Newcastle-upon-Tyne.

Pass List.—George Nixon Biggs, St. Thomas's Hospital; John Frederick Bridge, Birmingham University; Horsley Drummond and Hamilton Drummond, College of Medicine, Newcastle-upon-Tyne; Archibald Finlay, London Hospital; Sebert Francis St. Davids Green, M.R.C.S., L.R.C.P., Captain R.A.M.C., St. Bartholomew's Hospital; Arthur Beresford Jones, John Charles Norman, and John Cuthbert Pearce, A.Sc., College of Medicine, Newcastle-upon-Tyne; Leslie Martin Rosten, St. Bartholomew's Hospital; Robert Rutherford and Richard Geoffrey Shaw Simpson, College of Medicine, Newcastle-upon-Tyne; Alan Ayre Smith, M.R.C.S., L.R.C.P., Guy's Hospital; and Robert Joseph Weidner and James Leslie Wilson, M.P., College of Medicine, Newcastle-upon-Tyne.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF EDINBURGH AND FACULTY OF PHYSICIANS AND SURGEONS OF GLASGOW.—At the April sittings of the Conjoint Board held in Glasgow the following candidates passed the respective examinations for the triple qualification:—

First Examination.—Owen Thomas Jones, Bangor, North Wales (with distinction); and Fred. Garnet Allan, Whaley Bridge, Cheshire.

Second Examination.—Norman Bennington Watch, Portsmouth; John Henry Morris Jones, Waenfawr, North Wales; Hugh Watson, Lochwinnoch; John Francis O'Brien, Ballincollig, County Cork; Thomas M'Clure, Randalstown; Jamsetji Pallonji Bamboat Bombay; Jeremiah Joseph O'Callaghan, Cork; William Church Mann, Castledawson; Evan Alan Sevill Shaw, Callao, Peru; William Frederick F. Durr, Cape Colony; and Gavin Watson Hill, Lesmahagow.

Third Examination.—David Edward Anderson Buchanan, Australia; Harold Salter Gettings, Lutterworth; Thomas Percy Cox, Norwich; Wm. Watkin Neilson Knox, Glasgow; William Wallace Dempster, Dublin; James Joseph Egan, Galway; Thomas Graham Campbell, Glasgow; Beatrice Fanny Board, East Pennard; Percy Bateman, Cork; Walter Emory Davies, Owens College, Manchester; and John Wylie, Glasgow.

Final Examination and admitted Licentiates of the Three Coöperating Authorities.—Maud Farley Everett, Rushmere, Ipswich; William Henry Williams, Liverpool; Edgar Nesbitt Coutts, Paisley; John O'Brien, Lismore, County Waterford; Beatrice Fanny Board, East Pennard, Shepton Mallet; Eva Mary Handley, London; Stephen M'Carthy, Edinburgh; Everard Claye, Manchester; John Lang Niven, Edinburgh; Angus M'Innes, Old Kilpatrick; Charles Edward Ross, Glasgow; John O'Connor, Edinburgh; Hugh Fleming Warwick, Kilrea, Ireland; Sam Cunliffe, Edinburgh; John Bertram L. S. Scott, Withington, Manchester; and Richard Henry Rigby, Pontefract.

CONJOINT EXAMINATIONS IN IRELAND BY THE ROYAL COLLEGE OF PHYSICIANS AND THE ROYAL COLLEGE OF SURGEONS.—At the second professional examination held recently candidates have passed as undernoted:—

Honours, in order of merit.—George Sheppard, Thomas T. O'Farrell, and R. M. Bronté.

Passed in all subjects.—Miss H. O. D. Beamish, T. A. Buchanan, T. Crowley, H. J. Raverty, and R. O. Kelly.

Completed the examination.—P. M. Carroll, J. Daniell, M. I. Kelly, B. C. A. Leeper, I. H. Lyne, I. G. McGreal, H. V. McKeogh, James O'Brien, W. B. Soady, and M. Walters.

In the list of honours at the first professional examination recently published Mr. A. E. S. Martin's name was inadvertently omitted.

FOREIGN UNIVERSITY INTELLIGENCE.—*Bologna:* Dr. U. Gardini of Modena has been recognised as *privat-docent* of Operative Medicine.—*Göttingen:* Dr. Paul Stolper, *privat-docent* of Forensic Medicine, has been promoted to an Extraordinary Professorship.—*Padua:* Dr. Luigi Lucatello, Extraordinary Professor of Internal Pathology, has been promoted to the Ordinary Professorship. Dr. Riccardo Avanzi has been recognised as *privat-docent* of Psychiatry.—*Paris:* Dr. Innocente Clivio, Extraordinary Professor of Midwifery and Gynæcology, has been promoted to an Ordinary Professorship. Dr. M. Albanese has been appointed Professor of Materia Medica and Experimental Pharmacology.—*Prague (German University):* Dr. Ferdinand Schenk has been recognised as *privat docent* of Midwifery and Gynæcology; Dr. Oskar Bail, *privat-docent* of Hygiene, has been promoted to an Extraordinary Professorship.—*Rome:* Dr. Giuseppe Vannini has been recognised as *privat-docent* of Internal Pathology, and Dr. Ernesto Guaruaccio as *privat-docent* of Oto Rhino-Laryngology.—*St. Petersburg (Military Medico Chirurgical Academy):* Dr. Boris Sloutzoff has been recognised as *privat-docent* of Physiological Chemistry and Dr. Alexander Lasurski as *privat docent* of Neurology and Psychiatry.—*Strasburg:* Dr. Paul Ascher has been recognised as *privat-docent* of Children's Diseases.—*Tübingen:* Dr. Hugo Lüthje has been recognised as *privat-docent* of Internal Medicine and Dr. Bernhard Honsell as *privat docent* of Surgery.—*Vienna:* The chair of Dermatology, vacated by the retirement of Dr. Neumann, has been filled by the appointment of Dr. Ernst Finger. Dr. Siegmund von Schumacher has been recognised as *privat-docent* of Anatomy.

CALLS TO THE BAR.—Among those gentlemen called to the Bar on Wednesday, April 27th, we note the names of Mr. Digby Cotes-Preedy, M.A. Cantab., L.S.A. Lond., of the Inner Temple and late house physician at St. George's Hospital; Mr. E. F. Goodhart, B.A. Oxon., of the Inner Temple, son of Dr. J. F. Goodhart of London; and Mr. H. S. Maurice, B.A. Oxon., of Lincoln's Inn, son of Dr. J. B. Maurice of Marlborough.

DONATIONS AND BEQUESTS.—The treasurer of the London Hospital has received from Mr. Edward Davis, of Cheltenham, a donation of £1000 and from the Clothworkers' Company a donation of £200, being the second instalment of the contribution of £1000 voted by its court.—The late Mr. William Sutton, M.D. St. And., M.R.C.S. Eng., has by his will bequeathed £1000 to the Dover Hospital and Dispensary and a like sum to the Royal Medical Benevolent College at Epsom and to the British Medical Benevolent Fund, £500 to St. Thomas's Hospital, £300 to the Institution of Trained Nurses at Dover, £250 to the London Hospital, and similar sums to Guy's Hospital, Charing Cross Hospital, and the Royal Free Hospital.

PLUMBERS' EXAMINATION AT KING'S COLLEGE.—23 plumbers applying for registration under the National Registration of Plumbers attended at King's College on April 23rd for examination by the Worshipful Company of Plumbers. The candidates were from various parts of London and also from Cambridge, Dorking, Egham, Esher, Hemel Hempstead, Sevenoaks, Walton-on-the-Naze, and Windsor. The practical test included lead bossing and the making of plumbers' joints, &c. The examination questions included the subjects of contamination of drinking water from faulty connexions, roof covering, arrangement of bath, sink, and closet wastes, drainage of town houses, and disconnexion with sewers. The examiners were: Mr. Joseph Johnson and Mr. Charles Thomerson, master plumbers; and Mr. W. Smeaton and Mr. F. Wyatt, representing the United Operative Plumbers Association of Great Britain and Ireland. Five candidates succeeded in passing the examination.

STATE REGISTRATION OF NURSES.—On April 22nd a meeting was held at the Chelsea Infirmary to discuss the question of State registration for nurses. Miss Isla Stewart, the matron of St. Bartholomew's Hospital, occupied the chair, and the speakers included Lady Helen Munro Ferguson, Mr. James Cantlie, Mr. Richard Rigg, M.P., Miss Mollett, matron of the South Hants General Hospital, and Mrs. Bedford Fenwick. Miss Stewart told the meeting that to her knowledge many of those women who had been dismissed from St. Bartholomew's Hospital as incompetent were now earning two guineas a week as private nurses. Mr. Cantlie argued that it was unfair to the general body of nurses that the metropolitan hospitals' certificates should acquire a value superior to that of equally well-organised hospitals in the provinces and that if the training of nurses was properly organised in all hospitals under a central council it would be of advantage to the great body of nurses. He said that there were just as good surgeons and training schools in Birmingham, Edinburgh, or Glasgow as there were in London and the certificate of nurses trained in any such approved training school should be recognised as equal to those of their London trained sisters. Miss Mollett showed from her own experience how many nurses left the general hospitals totally unable to assist surgeons at operations because such work was undertaken by the students in the larger training schools. She instanced her own sense of incompetency on first leaving her training school and being asked to assist at a major operation. Mr. Rigg dwelt on the Parliamentary aspect of the question

and advocated a select committee to inquire into the whole subject. He undertook to give all the assistance in his power. The following motion was put to the meeting and unanimously carried: "That this meeting warmly supports the principles of State registration for nurses."

FOOTBALL ACCIDENT. — A football fatality occurred at Weston-super-Mare on April 23rd, a young man fracturing his skull by colliding with another player.

PRESENTATION TO A MEDICAL PRACTITIONER.—Mr. Richard Julyan George, M.D., C.M. Edin., of Port Isaac, Cornwall, has been presented by the committee of management of the Royal National Lifeboat Institution with a Ross binocular glass in recognition of his valuable and generous efforts in behalf of the institution during the past 11 years whilst holding the office of honorary secretary to the Port Isaac branch.

SMALL-POX IN LONDON.—The report of the Public Health Committee presented to the London County Council shows that in the two days of the week ending April 9th, the first week in which chicken-pox was notified in London, 200 cases of this disease were certified and that in the subsequent week this number amounted to 704, while in the week ending April 23rd 574 cases were notified. The services of Mr. Samuel Bingham and Mr. W. McC. Wanklyn for the diagnosis of doubtful cases of small-pox in London had up to April 21st been utilised in 33 instances, 16 of these cases proving to be small-pox, seven to be chicken-pox, and the remaining 10 to be other diseases. The large experience which these gentlemen have had of small-pox whilst in the service of the Metropolitan Asylums Board will prove of especial value in the present prevalence.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The following prizes for the winter session 1903-04 have been awarded:—First year students: J. A. Clark, the William Tite scholarship, £25; R. W. Rix, College prize, £20. Second year students: H. J. Nightingale, the Peacock scholarship, £35; A. C. F. Turner, College prize £20; H. G. Bennett, College prize, £10. Fifth year students: A. G. Gibson (medicine), £10; H. A. Kisch (surgery), £10; C. E. Palmer (midwifery and diseases of women), £10; A. G. Gibson (pathology), the Haddon prize, £10; K. Takaki (pharmacology and therapeutics) and F. A. Broadribb and E. W. Parry (forensic medicine and insanity) £5 each. The Mead medal for proficiency in medicine, pathology, and hygiene was awarded to K. Takaki; the Wainwright prize £10, and the Seymour Graves Toller prize were awarded to A. G. Gibson, of Christ Church, Oxford; and the Cheselden medal for proficiency in surgery and surgical anatomy was awarded to H. A. Kisch.

AMBIDEXTRAL CULTURE SOCIETY.—A lecture on Ambidexterity and Primitive Man was delivered before the above society on April 20th by the Rev. H. Dukinfield Astley. Mr. Noble Smith was in the chair. The following is an abstract of the lecture. "Primitive man" here means early or prehistoric man. The analogy of the quadrumana, apes and monkeys, makes it probable that man in his beginnings was ambidextrous. The evidences that he was so are few but sufficient. These consist of:—1. Flint implements from the plateaux of Kent, near Igntham, which date from man's earliest appearance in Britain and have been called "eolithic," though I would prefer to call them "proto-palæolithic." At any rate they go back to the first interglacial period and are probably contemporary with the Tilloux-Taubach deposit in France. Among these, rude and rough though they are, scrapers, hammers, and pounders have been found clearly adapted for use in the left hand, and these as numerous as those adapted for use in the right. 2. As time went on palæolithic man learnt to heft his implements and weapons, hence it is difficult to say anything definite as to these. But he was an artist—on the fact that his representations of the mammoth, the reindeer, horses' heads, &c., were drawn with equal facility from right to left as from left to right, we have evidence that he drew with both hands impartially. 3. Neolithic man, of course, hefted most of his weapons and implements, but certain articles of domestic use were employed without a handle, such as pounders, meat crushers, hammers, knives, scrapers, awls, and borers, and it has been found by a study of the flakings that those adapted for use in the left hand are nearly as numerous as those intended for the right. But by this time man was losing his primitive ambidexterity and the right hand was becoming more and more the active member in the economy of the body and the left hand the passive. This was due to the fact that in hunting and in warfare the right hand was used for offence, the left for defence. In spite of this the evidence of early Greek and Roman inscriptions, written in what is called the "boustrophedon" style—i.e., alternately from left to right and from right to left—goes to show that ambidexterity was still practised in writing. Babies are naturally ambidextrous and children, who commence conscious life at the neolithic stage of culture, are so also and would continue so were they not taught otherwise. It is said that "idiots" show a marked tendency to revert to this type and also "persons of genius."

THE MEDICAL GOLF TOURNAMENT.—The medical golf tournament for 1904 is to be held on Thursday, June 9th, at Northwood by the courtesy of the Northwood Golf Club. This annual fixture has become very popular and a successful meeting in point of numbers is already assured, so that if the competitors are favoured with a fine day the attendance will probably be a record one. It is fortunate that the Northwood golf links have been again secured for the tournament because the club is a well-known rendezvous for medical golfers, has the advantage of a frequent service of trains from Baker-street station, and the club-house is connected with the telephone. The details of the programme are as follows. In the morning 18 holes will be played, match play *v.* Bogey, and no match may start later than 3 P.M. Players will be divided into two classes: Class 1, handicaps of 12 and under; Class 2, handicaps of more than 12 (24 limit); and members of the Northwood Golf Club will have two deducted from their handicap. There will be a first and second prize and a prize for the best score for the last nine holes *v.* Bogey in each class. There will be a foursome sweepstake competition *v.* Bogey in the afternoon. Players are to arrange their own matches or they can apply to the honorary secretary of the tournament, stating the time that they wish to play. Entries, mentioning lowest handicap and inclosing a 5*s.* entry fee, should be made on or before June 8th, to the honorary secretary, Mr. Rolf Creasy, Windlesham, Surrey.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Nourishment of School Children.

IT had been hoped that the whole of the evening sitting on April 20th would be devoted to the discussion of Mr. CLAUDE HAY'S motion in regard to the nourishment of school children but, unfortunately, at the last moment another matter obtained precedence and Mr. HAY was unable to speak before 11 o'clock. No division was possible in these circumstances. There was evidence, however, in the brief debate that arose that the matter was viewed with general sympathy. The motion put to the House read as follows:—"That the Board of Education should require arrangements to be made by the local education authorities whereby every child compelled by law to attend a public elementary school shall have received proper nourishment before being subjected to mental or physical instruction and that in cases in which proper food has not been provided for the child by its parents it should be first supplied by the local education authority and subsequently suitable action taken to recover the cost."

HOUSE OF COMMONS.

WEDNESDAY, APRIL 20TH.

Alleged Evasion of the Factory Acts.

Mr. FORDE RIDLEY asked the Home Secretary whether his attention had been called to a statement lately made by one of the sanitary inspectors of the borough of Bethnal Green as to the evasion of the Factory Acts in consequence of workrooms being part of tenement houses, thus avoiding inspection by the authorities as to the sanitary conditions, overcrowding, and other circumstances in which the work was done; and, if so, whether he could give any hope of these evils being remedied by the issuing of an Order in Council or other method.—Mr. AKERS-DOUGLAS replied: I do not clearly understand the question and I think there may be some misconception. So far as I can gather from inquiries, the statement referred to did not attribute any difficulty in enforcing the Factory Acts in workrooms to the fact that they form part of tenement houses, and, as a fact, the provisions of that Act are enforceable equally in tenement houses as elsewhere. I understand that it is a rule in Bethnal Green that these houses should be visited once a month. On the information before me no question appears to have arisen which calls for further action on my part.

Soldiers and Sailors in Lunatic Asylums.

Mr. JAMES O'CONNOR asked the Chief Secretary to the Lord Lieutenant of Ireland whether he could state the number of British sailors and soldiers at present confined in lunatic asylums in Ireland, and whether the Treasury, in accordance with the Lunacy (Ireland) Act, 1901, contributed to their maintenance, and if so, how much per head.—Mr. WYNDHAM replied: The inspectors of lunatics have no information of the number of sailors and soldiers confined in district asylums. There is no Treasury contribution in aid of the maintenance of discharged sailors and soldiers while so confined, but the ordinary capitation grant is payable in such cases out of the local taxation account.

Candidates for Dental Appointments.

Mr. SHACKLETON asked the Secretary of State for War whether his attention had been called to the fact that the expenses of the candidates for dental appointments who were asked to attend at the War Office for an interview were not paid, and, if so, whether he proposed to reconsider this decision.—Mr. ARNOLD-FORSTER replied: It is not the practice to give travelling expenses in such cases and there would not appear to be any sound grounds for making any alteration of the practice for the case in question.

Rats and the Plague.

Sir WALTER FOSTER asked the Secretary of State for the Colonies whether he would state the results of the use of Dr. Danysz's virus for the destruction of rats as applied in Cape Town in the year 1901; and, if the results were satisfactory, whether he would order the same means to be used to destroy rats at the South African ports affected by plague and in the Transvaal.—Mr. LYTTELTON said: I understand that the results of the use at Cape Town of Danysz's virus did not afford grounds for supposing that it was efficacious in the extermination of rats on a large scale. The means to be used to destroy rats at British South African ports are a matter for the Governments of the Cape of Good Hope and Natal. In the case of the Transvaal I see no reason to interfere with the discretion of the local government and its medical advisers, in whose competence to deal with the plague epidemic Lord Milner has full confidence.

THURSDAY, APRIL 21ST.

The Treatment of Epileptics.

Mr. SCHWANN asked the First Lord of the Treasury whether, seeing that mental disease was held by the authorities not to include epilepsy, he would extend the promised inquiry as to the treatment of the feeble-minded so as to include epileptics with a view to give the county councils power to make provision for sane epileptics which they did not at present possess.—Mr. BALFOUR said: I learn from my right hon. friend the Home Secretary that in the reference to any body of inquiry which may be set up the particular case which the hon. gentleman has in view will certainly be included.

Experiments on Dogs.

Mr. LOGAN asked the Home Secretary whether his attention had been directed to Professor Schäfer's experiments on dogs, and whether, seeing that 109 medical men entered a protest against the experiments as being cruel and useless, he proposed to take any action in the matter.—Mr. AKERS-DOUGLAS replied: Yes, Sir, the memorial to which the hon. Member refers has received my most careful consideration together with all the circumstances of the case, but for reasons which I explained in answer to questions last year I did not feel justified in disallowing the experiments.

Nursing in Workhouses.

Mr. SCHWANN asked the President of the Local Government Board whether he would state the cause of the delay in issuing the new order relating to nursing in workhouses.—Mr. LONG replied: Since the report of the Departmental Committee on this subject was made I have received a considerable number of representations on points relating to its recommendations. These representations have now been considered by the committee and I hope shortly to be in a position to deal with the matter by a general order.

An Irish Asylum Incident.

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he was aware that an attendant named Kenny of the Ballinasloe Lunatic Asylum inflicted injuries upon an inmate under his charge; and whether, in view of the fact that the acting medical superintendent dismissed Kenny, who had since been fined by a magistrate in £5, he could say for what reason the asylum committee had reinstated Kenny.—Mr. WYNDHAM replied: The facts are as stated. Kenny was ordered to pay a fine of £5 or in default to undergo two months' imprisonment with hard labour. The appointment and dismissal of asylum attendants are vested in the committee without power of intervention on the part of the executive. The committee, I understand, considered that the fine of £5, together with a caution which it administered to Kenny, was sufficient punishment. Should the committee insist on retaining the services of Kenny the Government will consider how far its action is consistent with the conditions upon which the capitation grant in aid of the maintenance of the insane is payable under Section 58 (2) of the Local Government Act, 1898.

A Medical Appointment Questioned.

Mr. SLOAN asked the Chief Secretary to the Lord Lieutenant of Ireland whether he could explain in what circumstances the committee of the Ballinasloe District Lunatic Asylum had appointed the junior medical assistant to be resident medical superintendent and refused the appointment to the acting medical superintendent; whether he could say what were the superior qualifications of the junior medical assistant that the acting medical superintendent did not possess; and whether he would take steps that the appointment be not sanctioned until the merits of each case had been duly considered.—Mr. WYNDHAM replied: The appointment of resident medical superintendent of the asylum is vested by law in the asylum committee but subject to the concurrence of the Lord Lieutenant. The papers connected with the appointment in the present case are now before the Lord Lieutenant.

Public Vaccinators.

Mr. LONG, answering Mr. CALDWELL, said: The Greenwich board of guardians appears to have resolved at its meeting on April 7th to enter into contracts with two members of its own body as public vaccinators. I have the question of the approval of these contracts under consideration. I may, however, remind the hon. Member that any person who is concerned in any contract entered into with a board of guardians is disqualified for being a member of such board.

MONDAY, APRIL 25TH.

Education of Epileptic Children.

Mr. WEIR asked the Secretary for Scotland whether, having regard to the fact that a sum of £3252 appeared in the Public Education (Scotland) Estimates for blind and deaf children, he would state what sum was provided for defective and epileptic children.—Mr. GRAHAM MURRAY replied: No special sum is provided for defective and epileptic children under any sub-head of the vote, but special rates of grant for such children are provided for in Article 20 (II.) of the Code and any sums paid under that article are charged against sub-head E of the vote (annual grants for day scholars). During the inspection year ending August 31st, 1903, the sum of £409 5s. 8d. was paid under the article named.

Fees of Medical Witnesses in Scotland.

Mr. W. F. LAWRENCE asked the Lord Advocate whether in sheriff courts the fee of one guinea per diem to a medical witness was a fixed sum or was liable to be reduced if the case was unimportant or took less than four hours' attendance.—Mr. SCOTT DICKSON replied: The regulation in regard to medical fees in the sheriff courts is as follows: Medical men when cited to give professional evidence from a distance of more than one mile from the towns in which they reside, if detained above four hours, are allowed not exceeding per day £2 2s., besides fares, but nothing additional for maintenance; if in town they are allowed not exceeding per day £1 1s. The fee of a guinea, therefore, is not a fixed sum. The procurator fiscal may exercise his discretion and give less than that sum, according to the circumstances.

Public Health Acts Amendment Bill.

Sir ALFRED HICKMAN asked the President of the Local Government Board whether, in view of the interest taken by municipal bodies throughout the country in the promised Public Health Acts Amendment Bill, he would say when he would introduce it.—Mr. LONG replied: I cannot at present fix a date for the introduction of the Bill, but I will introduce it at the earliest date practicable.

A Vaccination Case.

Mr. CROOKS asked the Secretary of State for the Home Department whether his attention had been called to the case of a man named Ward who was summoned at the Thames police court for non-compliance with the Vaccination Act on April 5th and to the fact that after he had produced a medical certificate as to the child's unfitness for vaccination the man was fined, the magistrate deciding against the man because he would not pledge himself to have the child vaccinated when he recovered, and afterwards declined to state a case for the High Court, and what action he proposed to take in the matter.—Mr. AKERS-DOUGLAS replied: I have inquired into this case and find no ground for action on my part. The offence charged was the failure to have the child vaccinated within six months of his birth. The medical certificate produced did not relate to that period and no exemption had been asked for. The father did not appear in answer to the charge. The magistrate was ready to take a lenient view of the case in accordance with his usual practice if he could have received any assurance of readiness on the part of the defendant to comply with the requirements of the law, but there was no doubt that the offence had been committed and the penalty incurred.

Cost of Small-pox in London.

Mr. COGHILL asked the President of the Local Government Board whether he could state what had been the total or approximate cost to the different local bodies of the outbreak of small-pox in 1903 in London and the metropolitan district and in the rest of England and Wales respectively.—Mr. LONG replied: There was no epidemic small-pox in London in the year 1903, the previous outbreak having in effect come to an end by Michaelmas, 1902. The expenditure of the Metropolitan Asylums Board in the year ending Michaelmas, 1902, in respect of the removal, care, and treatment of patients consequent upon the epidemic is estimated at £132,381. This is in addition to a capital expenditure of about £492,000 for accommodation and transport facilities which are practically still available. I am not in a position to give the particulars asked for as regards the other local authorities referred to in the question.

Schools and Epidemics.

Mr. SAMUEL YOUNG asked the Chief Secretary to the Lord Lieutenant of Ireland whether the medical officer of health of a district had power to close a national school in consequence of epidemic; and, if so, whether the teacher's salary was liable to be reduced in consequence of such closing.—Mr. WYNDHAM replied: A medical officer may recommend the closing of a school on the ground stated. The published regulations of the commissioners expressly provide that in such circumstances a teacher's salary shall not be liable to reduction except in cases where a school is closed for a very prolonged period. Salary without abatement may be paid for four consecutive months. An epidemic would hardly outlive this indulgence.

BOOKS, ETC., RECEIVED.

APPLETON, SIDNEY, 25, Bedford-street, Covent-garden, W.C.

Social Diseases and Marriage. Social Prophylaxis. By Prince A. Morrow, A.M., M.D., Emeritus Professor of Genito-urinary Diseases in the University and Bellevue Hospital Medical College, New York. Price 10*s.* net.

The Care and Feeding of Children. A Catechism for the Use of Mothers and Children's Nurses. By L. Emmett Holt, M.D., LL.D., Professor of Diseases of Children in the College of Physicians and Surgeons (Columbia University). With an Introduction by Eric Pritchard, M.A., M.D. Oxon., M.R.C.P. Lond. Third edition, revised and enlarged. Price 2*s.* net.

The Refraction and Motility of the Eye. For Students and Practitioners. By William Norwood Suter, M.D., Assistant Surgeon, Episcopal Eye, Ear, and Throat Hospital, Washington, D.C. Price 9s. net.

ASH AND CO., LIMITED, 42, Southwark-street, S.E.
Nursing Guide, Handbook of Nurses' League, and Register of Nurses Trained at Guy's Hospital. 1904. Price 1s. 6d.

BAILLIÈRE, TINDALL, AND COX, 8, Henrietta-street, Covent-garden, W.C.
The Dental Annual and Directory, 1904. Price 7s. 6d. net.

BREITKOPF UND HARTEL, Leipzig.
Die Cystoskopie des Gynakologen. Von Privatdozent Dr. Walter Stoeckel, Oberarzt an der Universitats-Frauenklinik zu Erlangen. Price M.8.

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne.
The Therapeutics of Mineral Springs and Climates. By I. Burney Yeo, M.D., F.R.C.P., Emeritus Professor of Medicine in King's College, London, Consulting Physician to King's College Hospital. Price 12s. 6d. net.

CHURCHILL J. AND A., 7, Great Marlborough-street, W.
Saint Thomas's Hospital Reports. New Series. Volume XXXI. Edited by Dr. H. P. Hawkins and Mr. W. H. Battle. Price 8s. 6d.

CONSTABLE, ARCHIBALD, AND COMPANY, LIMITED, 2, Whitehall-gardens, S.W.
The Clinical Causes of Cancer of the Breast and its Prevention. With Analyses of a Hundred Cases. By Cecil H. Leaf, M.A., M.B. Cantab., F.R.C.S. Eng., Assistant Surgeon to the Cancer Hospital and the Gordon Hospital for Rectal Diseases. Price 2s net.
Electricity and Matter. By J. J. Thomson, D.Sc., LL.D., Ph.D., F.R.S., Fellow of Trinity College, Cambridge; Cavendish Professor of Experimental Physics, Cambridge. With Diagrams. Price 5s. net.

COX, HARRY W., LIMITED, 9, 10, and 11, Cursitor-street, Chancery-lane, E.C.
X Rays and High Frequency. Practical Hints to Beginners. Gratis and post free to Practitioners.

DENTAL MANUFACTURING CO., LIMITED, 6-10, Lexington-street, Golden-square, W.
Notes on the Treatment and Filling of Teeth. By Wm. Cass Grayston, L.D.S. Second edition. Price 5s. net.

ENGEL KRINS, J., Spa, Belgium.
Notes on the Chalybeate Springs of Spa (Belgium). By R. Wybauw, M.D., Reader Agrége) in the University of Brussels, Resident Physician at Spa. Preceded by an Historical Introduction on the Influence of English Visitors upon the Development of the Town of Spa. By M. Albin Body, Archivist. Price not stated.

FISCHER, GUSTAV, Jena.
Lehrbuch der Experimentalphysik in Elementarer Darstellung. Von Dr. Arnold Berliner. Price, broschirt, M 14; gebunden, M.16.50.
Mitteilungen aus der Augenklinik des Carolinischen Medico-Chirurgischen Instituts zu Stockholm. Herausgegeben von Dr. J. Widmark, Professor der Augenheilkunde am Carolinischen Medico-Chirurgischen Institut zu Stockholm. Fünftes Heft. Price M.3.60.

FREE PRESS ASSOCIATION, Burlington.
Transactions of the Vermont State Medical Society for the Year 1903. Price not stated.

GAY AND BIRD, 22, Bedford-street, Strand, W.C.
On Passing Off or Illegal Substitution of the Goods of one Trader for the Goods of another Trader. By John Cutler, M.A., one of His Majesty's Counsel, Professor of Law at King's College, London, and Editor of the Official Reports of Patent Design and Trade-mark Cases. Price 1s. net.

HOEPLI, ULRICO, Milano.
Elettricità Medica. Del Dr. A. D. Bocciardo, Assistente ordinario all'Istituto di Clinica Medica della R. Università di Pisa. Price L.2.50.
Le Malattie dei Paesi Caldi, loro Profilassi ed Igiene. Con un'Appendice: La Vita nel Brasile. Del Dott. Carlo Muzio, Medico di 1a la. Classe nella Regia Marina. Price L 7.50.
La Rachitide e le Deformità da essa Prodotte. Del Dr. Paolo Mancini. Price L 4.

IMPRIMERIE DE LIBANIO DA SILVA, 29, Rua das Gaveas, 31, Lisbon.
La Malattie du Sommeil. Rapport présenté au Ministère de la Marine et des Colonies par la Mission envoyée en Afrique Occidentale Portugaise co-stituée par Annibal Bettencourt, Ayres Kopke, Gomes de Rezende, et Corrêa Mendes. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, E.C.
A Treatise on Orthopedic Surgery. By Royal Whitman, M.D., Instructor in Orthopedic Surgery in the College of Physicians and Surgeons of Columbia University, New York. Second edition, revised and enlarged. Price 28s. net.

LANE, JOHN, The Bodley Head, Vigo-street, London, W.
New Letters of Thomas Carlyle. Edited and annotated by Alexander Carlyle. Volumes I. and II. Price 25s. net.

LONGMANS, GREEN, AND CO., 39, Paternoster-row, E.C.; and THE CHARITY ORGANISATION SOCIETY, 15, Buckingham-street, Adelphi, W.C.
The Annual Charities Register and Digest. Thirteenth edition. 1904. With an Introduction by C. S. Loch, Secretary to the Council of the Charity Organisation Society, London. Price 5s. net.
Materia Medica, Pharmacology, and Therapeutics. Inorganic Substances. By Charles D. F. Phillips, M.D., LL.D. Aberd., and Edin., F.R.S., and F.R.C.S. Edin. Third edition. Price 21s.

MALOINE, A., 25-27, Rue de l'École-de-Médecine, Paris.
Le Syndrome Adénoidien. Ozène, Végétations Adénoïdes, Appendicite Chronique. Par le Dr Joseph Delacour. Price Fr.4.
Le Sanatorium-école. Par M. le Dr. Coste-de Lagrave, Médecin de Sanatorium. Deuxième impression. Price Fr.1.
Sanatorium-école. Premiers Préceptes aux Tuberculeux. Par M. le Dr. Coste de Lagrave, Médecin de Sanatorium. Deuxième impression. Price Fr.1.

MASSON ET CIE, Paris.
Carte de la Savoie et du Dauphiné. Géologie et Eaux Minérales. Par le Dr. Dardel. Price not stated.

NAUD, C., 3, Rue Racine, Paris.
L'Origine du Diabète et ses Rapports avec les États Morbides des Glandes Vasculaires Sanguines. Par M. le Dr. A. Lorand, Médecin Consultant aux Eaux de Carlsbad. Price Fr.2.

OFFICE OF THE SUPERINTENDENT OF GOVERNMENT PRINTING, Calcutta, India.
The Countess of Dufferin's Fund. Nineteenth Annual Report of the National Association for Supplying Female Medical Aid to the Women of India. For the year 1903. Price Rs.1 or 1s. 4d.

SCHLESIER AND SCHWEIKHARDT, Strassburg i.E.
Befruchtung und Geschlechtsbildung. Von Dr. Heinrich Bayer, a.o Professor an der Kaiser-Wilhelms-Universität Strassburg. Price M.1.50

WHITTAKER AND CO., 2, White Hart-street, Paternoster-square, E.C.
Radium and All About It. By S. R. Bottone, author of "Radiography," "Wireless Telegraphy," "Electrical Instrument Making," &c. Price 1s. net.

WILLIAMS AND NORGATE, 14, Henrietta-street, Covent-garden, W.C.
Atlas zur Vergleichenden Histologie der Wirbeltiere nebst erläuterndem Texte. Auf Grund eigener Untersuchungen und Originalpräparate bearbeitet und gezeichnet von N. Loewenthal, Professor der Histologie an der Universität Lausanne. Price £1 16s.

UNIVERSITY PRESS, ROYAL UNIVERSITY OF IRELAND, Dublin.
The Royal University of Ireland. Examination Papers. 1903. A Supplement to the University Calendar for the year 1904. Price not stated.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

ADAMS, ALFRED, M.B., B.Ch. Oxon., L.R.C.P. Lond., M.R.C.S., has been re-appointed Medical Officer for the Polperro District by the Liskeard (Cornwall) Board of Guardians.

BOND, FRANCIS, M.D. Lond., M.R.C.S., F.R.S. Edin., has been re-appointed Medical Officer of Health for the Cirencester Division of the Gloucestershire Combined Sanitary District.

BUTLER, GAMALIEL H., M.R.C.S., L.R.C.P. Lond., has been appointed a Member of the Board of Examiners in Dental Surgery and Dentistry in Tasmania.

CLARKE, ARTHUR H., M.R.C.S., L.R.C.P. Lond., has been appointed a Member of the Board of Examiners in Dental Surgery and Dentistry in Tasmania.

CRAIG, ROBERT GORDON, M.B., Ch.M. Syd., has been appointed Honorary Demonstrator in Anatomy at the University of Sydney, New South Wales, Australia, for the year 1904.

CROWTHER, EDWARD L., M.D. Aberd., has been appointed a Member of the Board of Examiners in Dental Surgery and Dentistry in Tasmania.

DEY, R., M.B. Syd., has been appointed Medical Officer at the Hospital at Bourke, New South Wales, Australia.

ELLIS, L. ERASMUS, M.D. Brux., M.R.C.S., L.R.C.P. Lond., L.S.A., has been appointed Clinical Assistant to the East London Hospital for Children, Shadwell, E.

HICKENS, WILLIAM, L.R.C.P. Lond., M.R.C.S., has been appointed Public Vaccinator for Redruth by the Redruth (Cornwall) Board of Guardians.

KIRKLAND, T. S., M.D. Glasg., F.R.C.S.E., has been appointed a Member of the Dental Board of New South Wales, Australia.

MACLAURIN, CHARLES, M.B., C.M. Edin., has been appointed Honorary Assistant Surgeon at the Royal Prince Alfred Hospital, Sydney, New South Wales, Australia.

ROBERTS, EDWARD J., M.B., Ch.B. Univ. N.Z., has been appointed House Surgeon to the Hobart Hospital, Tasmania.

SPENCER, A. R., M.B. Lond., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Medical Officer at the Hospital for Epilepsy and Paralysis, Maida-vale.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BELGRAVE HOSPITAL FOR CHILDREN, Clapham-road, S.W.—Resident Medical Officer for six months. Salary at rate of £40 per annum, with board and lodging.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Pathologist. Salary £300 a year.

CARDIFF INFIRMARY.—Honorary Assistant Ophthalmic Surgeon.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's-buildings, Holborn-circus, E.C.—Honorary Physician.

GORDON HOSPITAL, Vauxhall Bridge-road, S.W.—Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, London, W.C.—Medical Registrar. Honorarium 50 guineas a year.

LEICESTER INFIRMARY.—House Physician. Salary £100 per annum, with board, apartments, and washing.

LIVERPOOL ROYAL SOUTHERN HOSPITAL.—Honorary Anæsthetist.

MONKWEARMOUTH AND SOUTHWICK HOSPITAL, Sunderland.—House Surgeon. Salary £80 per annum, with board, lodging, and washing.

NORFOLK AND NORWICH HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, E.—House Physician. Also two House Surgeons, each for six months. Salary at rate of £60 per annum, with board, residence, and laundry allowance.

NOTTINGHAM GENERAL HOSPITAL.—Assistant House Surgeon. Salary £100, with board, lodging, and washing.

OLDHAM INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, residence, and washing.

PARISH OF ST. LEONARD, SHOREDITCH, INFIRMARY AND WORKHOUSE, Hoxton-street, N.—Medical Officer. Salary £300 per annum, with apartments, board, washing, and attendance.

PERTH DISTRICT ASYLUM, Murthly.—Assistant Physician. Salary £110 per annum, with board and apartments, &c.

ST. PANCRAS, LONDON, INFIRMARY AND WORKHOUSE, Cook's-terrace, Pancras-road.—Assistant Medical Superintendent and Assistant Medical Officer. Salary at rate of £135 per annum, with residential allowances.

SAMARITAN FREE HOSPITAL FOR WOMEN, Marylebone-road, N.W.—Clinical Assistants.

SETTLEMENT OF WOMEN WORKERS (CANNING TOWN) MEDICAL MISSION HOSPITAL.—Senior Resident Medical Officer (female). Salary £100 per annum.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging and washing.

SOCIETY OF APOTHECARIES OF LONDON.—Examiner in Medicine.

THROAT HOSPITAL, Golden-square, W.—Senior Clinical Assistants.

WEST HAM HOSPITAL, Stratford, E.—Junior House Surgeon. Salary £75 per annum, with board, residence, &c.

WORCESTER GENERAL INFIRMARY.—House Physician. Salary £80 per annum, with board and residence.

YORK DISPENSARY.—Resident Medical Officer, unmarried. Salary £120 a year, with board, lodging, and attendance.

Births, Marriages, and Deaths.

BIRTHS.

BLAKENEY.—On April 26th, the wife of J. Henry Blakeney, L.R.C.P. Lond., &c., of Loughloher, Cahir, co. Tipperary, Ireland, and Woodford, Bristol-road, Birmingham, of a son.

DUNNETT.—On April 23rd, at 7, Acott-avenue, Ealing, W., Agnes Dunnett, M.B. Lond., wife of Lionel Francis Dunnett, of a son.

JONES.—On Sunday, April 24th, 1904, at 1, Walton-place, Hans place, London, S.W., the wife of W. Paul Jones, M.D., L.R.C.P., of a son.

MARSHALL.—On April 22nd, at Vernon House, Huddersfield, the wife of William Lawrence Wright Marshall, of a daughter.

PENROSE.—On April 24th, at Highbury New Park, N., the wife of A. W. Penrose, M.R.C.S., L.R.C.P., L.D.S., of a daughter.

SIMMONS.—At Standerton, Transvaal, on March 28th, the wife of Dr. H. C. Simmons, J.P., District Surgeon, of a daughter.

TULK-HART.—On April 23rd, the wife of T. J. A. Tulk-Hart, M.D., B.S., of 4, Gloucester-place, Brighton, of a daughter.

MARRIAGES.

KELYNACK—MCLAREN.—On the 27th inst., at St. Stephen's, East Putney, by the Rev. Innes B. Wane M.A., rector of Castle Ashby, Northampton, assisted by the Rev. Canon Barker, M.A., vicar of St. Marylebone, and the Rev. A. Rouse, M.A., vicar of St. Stephen's, T. N. Kelynack, M.D., M.R.C.P., of 120, Harley-street, Cavendish-square, W., eldest son of the Rev. Nicholas Kelynack, to Clara Violet McLaren, M.B., Ch.B. Edin., only daughter of the late James Grieve McLaren of Calcutta, and granddaughter of David McLaren J.P., D.L., of Rydal House, East Putney, S.W.

TIPPING—COOPER.—On April 20th, at the parish church of St. Iltyd, Ilston, Harold Tipping, M.B. Lond., M.R.C.S., &c., to Florence, youngest daughter of the late Mr. W. Cooper, of Carmarthen, and Mrs. Cooper, Ilston House, Ilston.

DEATHS.

MACDONALD.—At 18, Castle-street, Dumfries, on April 19th, Alexander Dall MacDonald, M.D., &c., in his 59th year.

PALMER.—On April 23rd, at Newbury, Berks, Montagu Humphrey Courtenay Palmer, M.R.C.S., L.R.C.P., aged 32 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

WHAT IS THE TRICK?

A MEDICAL man has sent to us the circular which follows. It is evidently a variant of the circular upon which we commented in THE LANCET of April 13th, 1901, p. 1117. But the high aristocrat grows no older, for he was forty years of age in 1901. Our correspondent says "I fail to see how the advertiser is going to make it pay," and we are in the like situation, though we have a feeling that there is a swindle somewhere. Possibly some of our readers may have more *flair* for that swindle than we have. This is the circular:—

> "Dear Sir,
>
> "Philantropist of high aristocracy, 40 years old, millionaire, wishes for special motives to get married to a distinguished lady——."

A gap here follows which we presume is to be filled by the words upon a separate slip of paper which are—

> "who is in the (interesting) situation of hopefulness."
>
> "Splendid pecuniary compensation is assured. Any intelligence-office in Vienna will give you informations about me.
>
> Yours respectfully, ——."

The circular is sent out in German, English, and French. Yet another slip of paper bears the name of the sender who claims to be a baron and a captain in the navy and gives as his address Lovrana. The suggestion is obvious. A gentleman with a title, and with money to support it, wants a son to succeed him, and, having reason to doubt his own virility, wishes to marry a pregnant woman and one who is also distinguished. That the story is rubbish is certain, but what we want to know is wherein does the swindle lie? If no money is to be made by the dissemination of the circulars, for what purpose are they distributed?

A NEW DISEASE.

THE following paragraph which we reproduce from a contemporary will be of special interest to those concerned with tropical diseases.

> "TYMPANOSOMA."
>
> Colonel David Bruce, who lectured on "the sleeping sickness in Uganda," stated that on the examination of blood taken from a patient a little wormlike parasite was found.
>
> This was called a "tympanosoma," and was only found in sufferers from the disease.

TO MEDICAL FREEMASONS.

To the Editors of THE LANCET.

SIRS,—May I through the medium of THE LANCET thank those who sent me votes for the medical candidates in the recent elections for the Royal Masonic Educational Institutions for their response to the appeal which was published in your issue of March 19th? The boy, Patrick Trevor Webster, was successful with 4041 votes, being twenty-first out of the 30 candidates elected. The girl, Irene Mabel Sewart, was unfortunately not successful and only polled 398 votes. But we hope that a unanimous response from medical Freemasons at the October elections will insure her success. The election for the Royal Masonic Benevolent Institution for Aged Freemasons and the Widows of Freemasons will take place on Friday, May 20th. Mrs. Georgina Skinner, widow of the late W. Bro. David Skinner, M.D., late medical officer of health of Willesden (P.M. 665, 1974; P.Z. 490) is the candidate whose claims were advocated in a previous issue of THE LANCET. May I once more appeal for votes on behalf of this most deserving case which will especially appeal to medical Freemasons. Votes will be thankfully received by myself or our treasurer, Dr. J. Eyre, Wandle House, Wandle-road, Upper Tooting, S.W.

I am, Sirs, yours faithfully,

HAROLD S. SINGTON,
Secretary, St. Luke's Medical Lodge of Instruction.

44, St. Mary's Mansions, W., April 23rd, 1904.

RED GLASSES IN THE TREATMENT OF BLEPHARITIS.

A CORRESPONDENT who writes from Bangkok, Siam, states that he has long suffered from sore eyes and has been wearing dark glasses as a relief from the glare. On reading Finsen's experiments he became convinced that "although the dark glasses were a protection to the eye as the organ of vision they were causing the soreness of the eyelids." He therefore discarded the dark glasses and wore colourless ones and "in a single day the soreness of the eyelids disappeared." He proceeds to ask whether the use of red glasses for a short period might not be equally efficacious. Our correspondent does not say whether he has used lenses for the correction of his probable errors of refraction, nor does he give any particulars in regard to the amount or kind of his work or the conditions under which it is performed, so that no conclusions can be drawn from his particular case, but the suggestion that the wearing of close-fitting goggles with red glasses for a short period daily where the ordinary methods of treatment fail might be serviceable is perhaps worthy of consideration, the more so as it is of easy application.

SPITTING ON THE GROUND.

To the Editors of THE LANCET.

SIRS,—A recent contributor to your paper expressed regret that spitting on the ground was not a penal offence. But were it so, how does he think we who are subject to bronchial colds should meet the difficulty? My doctor tells me to walk about. He also forbids me to swallow what my cough brings up. He would hardly suggest the handkerchief, recourse to it being often not feasible.

I am, Sirs, yours faithfully,

ANTI-SYBARITE.

"*.*" Surely if spitting on the ground is feasible spitting into a handkerchief is equally so. But the handkerchief should be of paper, so that it may be burned without loss. Pocket spittoons are also made. —ED. L.

HOLMAN TESTIMONIAL FUND.

THE following further list of contributions has been forwarded to us by the honorary treasurer of this fund, Dr. John H. Galton, Chunam, Sylvan-road, Norwood, S.E., by whom or by the secretary, Mr. W. A. Berridge, Oakfield, Redhill, Surrey, subscriptions will be received:—

	£	s.	d.
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THE USE OF HOT BOTTLES AFTER SURGICAL OPERATIONS.

To the Editors of THE LANCET.

SIRS,—I read with interest and regret Mr. H. P. Symonds's letter on the above subject. I have worked in a good many hospitals and have been struck with the fact that few teach nurses the most essential things: too much is taken for granted; common sense is not largely developed in everyone. Sisters should take care that the nurses they are training do know the many little but important things that go to make a good nurse. Nowadays, nurses are taught so much theory that the practical work is apt to slip. I can never be thankful enough for the excellent training I received in one of the four large London hospitals, and in no hospital that I have worked since have I found a nurse who had received so much teaching in detail as I have; the great thing seems to be to "get through," no matter how. If sisters would only show nurses *how* to do things instead of telling them to do them there would not be so many regrettable accidents.

I am, Sirs, yours faithfully,

April 26th, 1904. A NURSE OF FOURTEEN YEARS' STANDING.

AN ORIENTAL FIBRE TOOTH BRUSH.

THE Oriental Fibre Tooth Brush Company has submitted to us a form of tooth brush which presents many advantages over those made with bristles. The material of the brush itself is a wood fibre, the wood being stated to come from a tree known as Al-Arak. The brush, which is detachable, is set into the handle by means of a clip ring so that it can easily be taken out and a new one substituted. From a personal trial we can say that it is a good cleanser and, moreover, the lingual surfaces of the teeth can be as easily cleansed as the buccal surfaces, an act which is almost impossible with the ordinary tooth brush. A quotation is given in an accompanying pamphlet from a paper by Dr. Harry Campbell which appeared in our columns on August 8th, 1903, regarding the merits of a tooth brush of similar material. The quotation is headed, "Extract from the London Lancet." This is true so far as it goes but it implies that the extract is from editorial matter which is not the case. This, however, does not detract from the value of the tooth brush, the manufacturers of which are the above-mentioned company, of Farnham, Surrey. The price of the holder is 1*s.* and a box containing 12 brush heads costs another 1*s.*

Tight Corner (Africa).—The case as described by our correspondent is a most difficult, delicate, and embarrassing one which fully justifies the choice of his pseudonym. The details furnished are in the circumstances insufficient to enable us to offer an opinion. Only a complete knowledge of all the minutiæ of the case would justify us in recommending to our correspondent, who has our sympathy, the course of action which he should pursue. We trust that his own good judgment and sense of responsibility together with his acquaintance with the persons and the surroundings of the case will enable him to arrive at a wise conclusion. A consultation, if obtainable, with some other practitioner whose opinion would have weight with B is, we think, desirable.

A. A. N.—There are practically two institutions granting certificates of the kind mentioned by our correspondent. One is the Royal Institute of Public Health, 13, Bloomsbury-square, London, W.C., which grants certificates of "having passed an examination as sanitary inspector," and the other the Sanitary Institute, Margaret-street, Regent-street, London, W., which holds examinations and grants certificates of competency in sanitary knowledge. Examinations for inspectors of nuisances and for meat inspectors are also held.

Sceptic.—The regulations for admission to the examination for the diploma of F.R.C.S. England vary according to the time at which the would-be candidate has commenced professional study. They will be found in Section 20 of the By-laws of the Royal College of Surgeons of England which are published in the Calendar of the College.

Medico.—Our correspondent must obey the subpœna but is at liberty to ask, before he is sworn, for payment of his fees which probably would be £1 1*s.* per diem and second-class railway expenses. As to question (2) that must be a matter of arrangement between our correspondent and his principal.

E. S. W.—We do not think that there is any objection to our correspondent putting up a plate with an intimation that he attends at the house in question on certain days of the week at certain hours.

H. V. (Paisley).—We see no objection to a practitioner stating on his door-plate the hours during which he will be found at home. The style is a matter of indifference but possibly "At Home" is the more usual.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M., St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.).

TUESDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Royal Ear (3 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.).

WEDNESDAY (4th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

THURSDAY (5th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), St. Mark's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

FRIDAY (6th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.).

SATURDAY (7th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.). Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

TUESDAY (3rd).—PATHOLOGICAL SOCIETY OF LONDON (Guy's Medical School).—8.30 P.M. Dr. J. Fawcett: Sarcoma of Pancreas associated with Pseudo-lipæmia.—Mr. A. E. Boycott: Experiments on Ankylostoma Larvæ. Mr. C. Price-Jones: Method of Preparing Microscopic Films of Bone Marrow.—Dr. J. W. H. Eyre: Intestinal Bacteria on Nutrose Plates.

WEDNESDAY (4th).—OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown by Dr. Horrocks, Dr. F. E. Taylor, Dr. Lockyer, Dr. Fairbairn, and Mrs. Boyd, M.D. Short Communications:—Dr. H. C. Bartlett (introduced by Dr.

Boxall): A Case of Lithopædion of 14 years' duration, Laparotomy, Recovery.—Dr. F. E. Taylor: Two Cases of Enlarged Wandering Spleen forming Pelvic Tumours in Women. Paper:—Mr. A. Doran: Hæmatoma and Hæmatocele, a Study of Two Cases of Early Tubal Pregnancy.

THURSDAY (5th).—RÖNTGEN SOCIETY (19, Hanover-square, W.).—5.30 P.M. Meeting of the Medical Section. Paper: Dr. L. H. Harris (Sydney, N.S.W.): Three Years' X Ray Work.—(20, Hanover-square, W.).—8.30 P.M. Paper:—Mr. J. J. Vezey: The Röntgen Society, its Past Work and Future Prospects. Mr. F. H. Glew: Some Experiments with Alpha Rays.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM (11, Chandos-street, Cavendish-square, W.).—8 P.M. Specimens and Cases will be shown by Mr. A. L. Whitehead, Mr. N. B. Harman, Dr. A. Bronner, Mr. R. W. Doyne, Mr. J. H. Parsons, Mr. J. B. Lawford, Mr. R. E. Bickerton, and Mr. M. S. Mayou. 8.30 P.M. Papers:—Mr. M. S. Mayou: The Retina and Optic Nerves in Anencephaly. Major H. Herbert: Trachomatous Pannus and its Associated Corneal Changes. Dr. W. C. Rockliffe: (1) Optic Atrophy and Primary Amenorrhœa; (2) Optic Neuritis following Concussion of Globe; (3) Unusual Sequence in Cataract Extraction; (4) Peculiar Outbreak of Granular Ophthalmia.—Mr. W. R. Cant: Trichiasis and Operations for Trichiasis.

FRIDAY (6th).—WEST KENT MEDICO-CHIRURGICAL SOCIETY (Royal Kent Dispensary, Greenwich-road, S.E.).—8.45 P.M. Presidential Address:—Dr. R. E. Schofield: Some Considerations on the Causes and Treatment of Anæmia. Followed by a Smoking Concert by invitation of the President.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY (West London Hospital, Hammersmith, W.).—8.30 P.M. Papers:—Mr. L. A. Bidwell: The Operative Treatment of Pancreatitis.—Mr. W. McAdam Eccles: Lessons from a Year's Fatalities.

LARYNGOLOGICAL SOCIETY OF LONDON (20, Hanover-square, W.).—5 P.M. Cases and Specimens will be shown by Dr. StClair Thomson, Dr. L. H. Pegler, Dr. H. J. Davis, Dr. W. H. Kelson, Dr. A. Bronner, and others.

SOCIETY FOR THE STUDY OF DISEASE IN CHILDREN (11, Chandos-street, Cavendish-square, W.).—5.30 P.M. Dr. G. Carpenter: A Case of Chronic Intestinal Obstruction for Diagnosis. Papers:—Mr. W. W. Cheyne and Dr. R. H. W. Wilbe: A Case of Perforated Gastric Ulcer in a Boy.—Mr. H. J. Stiles (Edinburgh) and Dr. S. McDonald (Edinburgh): Delayed Chloroform Poisoning (with lantern demonstration).

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (2nd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. T. C. Fox: Clinique. (Skin). 5.15 P.M. Mr. B. G. A. Moynihan: Gall-stones and their Surgical Treatment.

TUESDAY (3rd).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Campbell: Clinique. (Medical.) 5.15 P.M. Dr. L. Williams: Personal Hygiene.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Dr. Beevor: Functional Tremors.

WEDNESDAY (4th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. M. Collier: Clinique. (Surgical.) 5.15 P.M. Dr. G. H. Savage: The Relationship of Syphilis to Insanity.

THURSDAY 5th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Mr. Hutchinson: Clinique. (Surgical.) 5.15 P.M. Mr. J. Clarke: Some Surgical Emergencies.

CHARING CROSS HOSPITAL.—4 P.M. Dr. M. Bruce: Demonstration of Medical Cases. (Post-Graduate Course.)

THE HOSPITAL FOR SICK CHILDREN (Gt. Ormond-street, W.C.).—4 P.M. Mr. Kellock: The Surgical Treatment of Empyema.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (7, Fitzroy-square, W.).—5 P.M. Introductory Address:—Professor G. Sims Woodhead: The Morbid Anatomy of Pulmonary Tuberculosis in Relation to the Clinical History of the Disease. (Post-Graduate Course.)

FRIDAY 6th).—MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M. Dr. H. Tilley: Clinique. (Throat).

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Queen-square, Bloomsbury).—3.30 P.M. Sir Victor Horsley: Surgery of the Nervous System.

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It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

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Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, April 28th, 1904.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rainfall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks at 8.30 A.M.
April 22	30·80	S W	...	87	54	40	42	46	Overcast
,, 23	29·73	NNE	0·41	96	60	46	47	48	Overcast
,, 24	30·14	W.	...	106	61	47	48	50	Overcast
,, 25	30·12	N.W.	...	113	56	45	45	50	Fine
,, 26	30·19	N W.	...	90	54	40	42	47	Fine
,, 27	30·08	NNW	0·01	107	58	43	45	49	Cloudy
,, 28	30·08	W.	...	68	55	47	49	52	Cloudy

During the week marked copies of the following newspapers have been received:—*Bradford Times, Bournemouth Daily Echo, Glasgow News, Cork Examiner, The Bystander, Hertfordshire Mercury, Natal Advertiser, Westminster Gazette New Age, Daily News, Hyde Reporter, Reading Mercury, Local Government Chronicle, Liverpool Daily Post, Aberdeen Free Press, Ipswich Times, Coventry Herald, Windsor and Eton Express, Cardiff News, Surrey Advertiser, Birmingham Daily Mail, Literary Digest (New York), South Wales Daily News, Scientific American (New York), &c.*

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Z.—Right Rev. The Lord Bishop of Zanzibar, Zanzibar.

Letters, each with enclosure, are also acknowledged from—

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